DISSERTATION ABSTRACT

THE DEVELOPMENT OF A MODEL FOR SCHOOL SUCCESS FOR INSTITUTIONALIZED CHILDREN ATTENDING PUBLIC SCHOOLS IN ATLANTA, GEORGIA

By

Betty W. Clark

Directed by

Dr. Samuel Silverstein

Problem

The primary purpose of the study was to determine what components should be included in an educational model which would accommodate all factors necessary for adequate achievement of institutional children within the regular public school setting.

A concomitant purpose of the study was an examination of the following null hypotheses:

1. There is no significant difference in academic achievement between students who receive the experimental treatment and the group that does not receive the experimental treatment.

2. There is no significant difference in attitude change between students who receive the experimental treatment and the group that does not receive the experimental treatment.

3. There is no significant relationship between academic achievement and attitude change among students who receive the experimental treatment and the group that does not.

The null hypotheses were tested at the .05 level of significance.

Procedures

The sample population consisted of sixty-six students enrolled in two orphan institutions and attending two Atlanta Public Schools.

The research method that was used was the experimental design and called for one experimental and one control group. The control group received the normal course of study provided by the Atlanta Public School in which they were enrolled. The experimental group was administered the BICYC Model by the teachers under the supervision of the researcher.

Data were collected through the administration of the Iowa Test of Basic Skills (IYBS) and the School Sentiment Index (SSI), as pre and post treatment measures.

Distribution of gains, analysis of variance and correlations were the statistical tools employed in the analysis of the data.

Findings

1. Pre treatment data failed to yield significant differences between the experimental and control groups as measured by the ITBS. Therefore, it was concluded that experimental and control groups were homogeneous prior to the administration of the BICYC Model. Post treatment analysis of gains for the experimental and control groups failed to produce significant differences between the experimental and control groups at the .05 level of significance. Thus, it was concluded that the BICYC Model did not modify the academic achievement level of the experimental group significantly. The null hypothesis was accepted at the .05 level of significance.

2. The data collected from the administration of the pre treatment measures were analyzed, experimental and control groups found to be homogeneous in attitudes toward school. This indicated that the experimental group and the control group were homogeneous as measured by the SSI at the outset of the study. If, therefore, any attitude changes appeared during the post treatment analysis and such changes were determined to be significant, it therefore would be reasonable to infer that such changes were attributable to the BICYC Model rather than to any differences existing prior to the treatment. Analysis of post treatment affective (SSI) results yielded significant differences between experimental and control groups. Thus, it was concluded that the BICYC Model had a significant impact on the attitudes towards school for the experimental group. Thus, the null hypothesis was rejected.

3. Analysis of the data failed to yield significant relationships between academic achievement and attitude change among experimental subjects who received the treatment and the group that was not exposed to the BICYC Model.

Thus, the data suggested that the cognitive level of the experimental group was not significantly affected by the administration of the BICYC Model while the affective level showed positive and significant gains at the .05 level of significance.

THE DEVELOPMENT OF A MODEL FOR SCHOOL SUCCESS FOR INSTITUTIONALIZED CHILDREN ATTENDING PUBLIC SCHOOLS IN ATLANTA, GEORGIA

A DISSERTATION

SUBMITTED TO THE FACULTY OF THE SCHOOL OF ECUATION,

ATLANTA UNIVERSITY IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF EDUCATION

BY

BETTY W. CLARK

SCHOOL OF EDUCATION

ATLANTA UNIVERSITY

ATLANTA, GEORGIA

MAY 1975

R= ix T= 109

DEDICATION

One person more than any other has provided the moral support and encouragement I needed in achieving my goals. To my wonderful husband, Isaac, whose belief in me never diminished and whose strong character sustained my spirits during the trials and tribulations of doctoral work, I dedicate this dissertation.

ACKNOWLEDGEMENTS

Special recognition must be given to several individuals whose assistance was invaluable in the preparation of this study. I would like to extend my sincere gratitude to Dr. Samuel Silverstein for the insights, trust, understanding, and encouragement he provided as my major professor during the course of this study. The humanistic philosophy he advocates and the manner in which he has applied this philosophy in his dealings with students has made working under his direction an unforgettable experience.

Appreciation is also gratefully extended to Dr. Ruby Thompson and Dr. Robert Hatch for serving on the committee and for providing suggestions which have improved the quality of this study.

Special thanks are also extended to Dr. Stephen Herrmann whose expertise and assistance were given in the interest of making this study a reality.

Acknowledgements must also be made of the assistance provided by my daughter, Karen Elaine Clark in preparing the data for analysis and to Mr. John Blackshear and my son, Isaac R. Clark, Jr., in analyzing the data.

TABLE OF CONTENTS

TABLE OF CONTENTS--Continued

LIST OF TABLES

LIST OF TABLES--Continued

LIST OF TABLES--Continued

LIST OF TABLES--Continued

CHAPTER I

INTRODUCTION

Rationale. Observations and special studies by psychologists, psychiatrists, social workers and educators have led to the conclusion that, above all else for normal physical, intellectual, emotional, and spiritual growth, the child needs to have a home where he is cherished, where he is secure, where his parents express their love, devotion, and encouragement to his emerging capacities in the personal care they give him. However, often it is necessary for children to be separated from their parents and placed in orphan institutions where they receive the physical comforts but where through no fault of the institution that must serve as parents to myriads of children, the opportunities for emotional, intellectual and spiritual growth are often less than those afforded to children who reside in the typical family homes.

While the public schools which receive these children are charged with the responsibility of providing an adequate education for all of its children, the task becomes a little more difficult when some of the prerequisites for successfully reaching the goal are missing.

Within the city of Atlanta there are several institutions for children whose parents are deceased or who for some reason are unable to care for them. Some of the children have never known their parents, having been made wards of the courts and assigned to the institution early in their lives. These are not delinquent children, but children with no

other place to call home.

Without exception the children in the homes within the Atlanta area come from what is typically classified as a "disadvantaged background."

A look at the academic achievement of these pupils as they attend public schools indicates that according to performance on standardized tests, they tend to score at levels markedly lower than pupils who come from typical homes, i.e., pupils who live with either or both parents.

Presently, the school curriculum does not accommodate these pupils with these unique needs. Little attention has been given to the special adjustment problems encountered by these youngsters. Some factors which may account for this include: The problem has never been brought to the attention of the school system; no viable solution to the problem has been presented.

As an educator in the Atlanta Public Schools for a number of years, the researcher has worked in various capacities. First as a classroom teacher, second as a Reading Specialist and presently as a principal of an elementary school. It was as classroom teacher in an "inner-city" school that the researcher had the first opportunity to work with institutional children in a public school setting. However, the institution and its children moved from the inner city to a middle-class predominantly black neighborhood. The campus to which they came was a stark contrast to the former location. The new campus had separate cottages for the various sexes and age groups. A large recreation hall, television viewing areas, and spaces for preparing snacks after the large spacious dining hall closes for the day, were among the many conveniences of the new facility.

The researcher continued to work in the inner city for five more years. An assignment as Elementary School Principal for the school which the institutional children attended brought the researcher into contact with children from the same institution once more.

After working and observing the situation in the school community for approximately five years, the researcher felt that a special program should be developed for the institutional children which would contribute to their affective growth as well as to their growth in the cognitive skills. Talks with other administrators whose schools served children from similar institutions, indicated that they too were faced with the same problems that the researcher had encountered.

What then can be done to help these pupils to achieve academic success? Now that the problem had been brought into the light the next step was to develop a program for schoolswhich are charged with the responsibility of educating these youngsters.

Contribution to Education. It is hoped that the model can be replicated in other school systems which serve institutional children to identify the unique needs of the learner and to determine ways to accommodate these needs. If a successful model can be set up, perhaps this will provide a national thrust towards coping with the problem.

Statement of the Problem. What components should be included in an educational model which will accommodate all factors necessary for adequate achievement of institutional children within the regular school setting?

Purpose of the Study. Specifically, the study proposes to test the following null hypotheses and to develop and validate a model for

school success for institutional children attending public schools.

Statement of Null Hypotheses. The study focused on the examination of the following null hypotheses:

H_{o1} There is no significant difference in academic achievement between students who receive the experimental treatment and the group that does not receive the experimental treatment.

H_{o2} There is no significant difference in attitude change between students who receive the experimental treatment and the group that does not receive the experimental treatment.

H_{o3} There is no significant relationship between academic achievement and attitude change among students who receive the experimental treatment and the group that does not.

The null hypotheses will be tested at the .05 level of significance.

Scope of the Study. The study will be limited to sixty-six institutional children residing in two orphanages and attending Atlanta Public Schools.

Definition of Terms. The following terms will be used in this study and are defined below:

1. Disadvantaged--refers to children whose family income from all sources is less than $3,000 per year.
2. Achievement level--refers to the level of academic performance as measured by standardized tests used by the Atlanta Public Schools.
3. Control group--refers to subjects who participated in the study but were not exposed to the model.

4. Experimental group--subjects who were exposed to the model.
5. Observations--refers to the series of tests and attitude scales administered to control and experimental groups prior to and after the model was administered.
6. Post-test--refers to observations made of control and experimental groups at the conclusion of the study.
7. Pre-test--refers to observations made of control and experimental groups prior to the program.
8. Treatment--refers to the administration of the components of the model.
9. Model--refers to the program designed by the researcher and used with the experimental group as part of this research.
10. Behavior modification--refers to a learning theory which emphasizes rewarding acceptable performances with tangible or intangibles and ignoring bad or poor behavior.
11. Campus parents--refers to regular classroom teachers who provided individual counseling and guidance to students before and after the regular school day.

Subjects and Instruments. The subjects were the children of elementary school age residing in two homes for orphans in the city of Atlanta who were attending two Atlanta Public Schools. The pupils in one of the institutions were predominantly black, while the other pupils were predominantly white. Both groups of children consisted of male and female pupils. (See Table 1, page 6)

TABLE 1

SAMPLE POPULATION

	Group I	Group II	Total
Sex			
Male	22	11	33
Female	21	12	33
Race			
Black	41	3	44
White	2	20	22
Other	0	0	0
Groups			
I Experimental	43		
II Control		23	
Total Pupils			66

The groups ranged in age from eight years to fourteen years of age. The grades involved were three through seven. Children living in the orphanges who were attending kindergarten and grades one and two were not included in the study. Pupils who attended high school and college were also excluded. Both institutions were in middle-class neighborhoods. The community in which the experimental group resided was predominantly black, while the control group lived in a predominantly white neighborhood. Both institutions housed male and female students. A total of one hundred pupils resided in the black institution while sixty youngsters lived in the predominantly white home. All pupils included in the study had been in the homes for a minimum of one school year.

The study took place during the first quarter of the 1974-75 school year in the Atlanta Public School System, Atlanta, Georgia.

The instruments used include:

1. Iowa Test of Basic Skills (ITBS). The Iowa Test of Basic Skills were prepared at the University of Iowa under the direction of A. H. Hieronymus and E. F. Lindquist. The tests were standardized with a norm group of 127,265 pupils stratified for geographic region, size of city, and percentage of population in total. In Georgia, the norm group was represented by pupils from Atlanta Public Schools, the Atlanta Diocese of Catholic Schools, and Quitman County. The scores on the ITBS are reported as grade equivalents, meaning that the raw score that the pupil makes is the same as that made by a typical pupil at the grade level of his grade equivalent score. The grade equivalent should be regarded as an estimate of where the pupils is along a developmental contiuum, not where he should be placed in the graded organization of the school. Often children perform at a level which is lower or higher than the actual grade placement.
2. The School Sentiment Index (SSI) from Instructional Objective Exchange provided data from the estimates of growth in the affective area. The Index is an inventory of thirty questions read orally by the tester. Pupils mark their papers yes or no on specifically designed sheets. The questions concern several aspects of school attitudes; teacher, learning climate, peer and general. Results are reported as the percentage of positive responses.

Pre and post test data were collected, analyzed, interpreted and presented as a part of this study.

Procedural Steps. This study was conducted through the following procedural steps:

1. Permission to conduct the study was received from the Atlanta Public Schools.
2. A survey of related literature was made and presented as part of this study.
3. Pretest data were collected, analyzed and interpreted.
4. The experimental treatment was initiated.
5. The post tests were administered.
6. Post-test data were collected, analyzed and interpreted.
7. The findings, conclusions, implications and recommendations which emerged from the analysis and interpretation of the data are presented at the conclusion of the study.

Method of Research. The research method that was used was the experimental design. The basic design was presented as follows:

	Experimental Group	Control Group
1.	Pre-test	Pre-test
2.	Experimental Factor	Control Factor
3.	Final Test	Final Test
4.	Comparison of Gains	

The groups were equated as to motivation, sex, general background, living conditions and general scholarship. This design was convenient because it matched groups rather than pairs. The matched group permitted the full use of the total groups even though the groups were not equal in size.

Summary

Chapter I directs attention to consideration of the following aspects of the study: (a) the definition of the problem as it relates to the study, (b) the justification of the study as a desirable and legitimate concern in the field of education, and the delineation of specific questions to which the experiment was directed.

Specifically, the current study was concerned with designing and validating a model for school success to be used iith institutional children attending public schools.

Chapter II examined the research conducted in the related areas and sought to report the direction of such research.

Chapter III concerned itself with a discussion of the first four stages of development in the experiment.

Chapter IV reported the findings of the study and a discussion of the findings as they related to the null hypotheses.

Chapter V directed its attention to a summary of the purpose, methodology and findings of the study. Further, it discussed conclusions based on the findings and recommendations for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Chapter II directs its attention to the examination of the literature relevant to the research in the area of the disadvantaged elementary school aged pupils and their performance in public schools. Also to be reviewed is literature which concerns itself with orphanage children attending public schools. Literature concerning the development and findings of other models for disadvantaged youth was researched. Education Index and ERIC were the major sources for articles and periodicals. Emphasis was placed on materials published in the time period from 1964-1974.

Characteristics of the Disadvantaged

The term "disadvantaged" is probably the most widely used term at the present to refer to populations to be served by special programs designed for low income people. The apparent neutrality of the term and lack of any precise meaning probably encourages its use. Disadvantaged implies little about the responsibility for the situation, whether it is some characteristic of the "disadvantaged" group, or some failure in the institutions of wider society. By adding prefixes such as "culturally" or "educationally" disadvantaged, these causal links can be made more specific. The term, however, does suggest some generally accepted criteria by which "disadvantaged" or "advantaged" can be assessed; where

these criteria, for example educational performance, are known to be closely associated with the way of life and institutions of the group involved, certain underlying assumptions of the term disadvantaged are exposed and its apparent neutrality brought into question. As the term has become linked to a particular viewpoint about the cause of such disadvantage, it has become increasingly unacceptable to the groups at which programs are aimed.

Fantini and Weinstein[1] have aided this process, by using the term disadvantaged to cover middle-class suburban children who find the school curriculum as out of step with their needs as do children in the inner city. In this way they have challenged the assumption by which the term disadvantaged is only applied to inner city children from poor background, racial minority groups, and the rural poor, both black and white who provide the source for new city immigrants--the economically disadvantaged. By including children from relatively affluent families, Fantini and Weinstein imply that the cause of the disadvantage lies not only in the poor home which prepares the child inadequately for school, but in the hidden curriculum of the home, whether in the inner city or suburb, which conflicts with curriculum content and method in the schools. By extending the reference of disadvantaged in this way, Fantini and Weinstein expose some of the assumptions by which the phrase is conventionally restricted to the poor.

Other terms which have been used to identify groups to take part in special programs for low-income people have more explicitly suggested some

---

[1]Mario D. Fantini and Gerald Weinstein, The Disadvantaged: Challenge to Education (New York: Harper & Row Publishers, 1968), pp. 1-37.

theory about how the situation developed. Phrases containing the word cultural--the culturally deprived, the culturally disadvantaged--as Mackler[1] points out, were often means of belittling the culture of minority ethnic groups, without any precise analysis of which cultural elements were responsible for educational failure.

Disadvantaged youth, according to Burrichter,[2] are often denied inter- and intra-personal competence. No organism can attain a sense of personal competence if continually confronted with insoluble problems. The only possible response for the individual in such a situation is to become apathetic or aggressive.

According to Burrichter,[3] cultural deprivation actually begins early in life. Many authors suggest within the first year, and some even at the time of birth. The culturally disadvantaged person is one who has had virtually no alternatives made available to him to the point where the professional comes in contact with him. This may be as early as the first day he enters elementary school or it may not come until he is ready for an adult program.

Among the specific barriers emphasized by Clark,[4] which are believed to be specific blocks to academic success among the culturally disadvantaged

---

[1]Bernard Mackler, "Cultural Deprivation: A Study of Mythology," Journal of Educational Sociology 66 (1965): 60-68.

[2]Arthur Burrichter, Special Techniques That Work in Teaching the Culturally Deprived (Englewood Cliffs, N. J.: Prentice-Hall, 1972), p. 18.

[3]Ibid., p. 23.

[4]Kenneth B. Clark, Cultural Deprivation Theories: Their Social and Psychological Implications (New York: Metropolitan Applied Research Center, Inc., 1972), p. 5.

environmentally determined sensory deficiencies; withdrawn or hyperactive behavior; low attention span; peculiar bizarre language patterns; lack of verbal stimulation, absence of father or stable male figure in the home.

The efforts to apprehend the why behind the inferior educational records of the disadvantaged, especially the phenomenon of cumulative academic and its consequences, have centered on understanding the pupils. There are those who blame this pupil failure on ineffective reaching by a rejecting staff, on a deliberate "programmed retardation." Clark, for instance asks to what extent this population does "not learn because those who are charged with the responsibility of teaching them do not act toward them in ways which help them to learn?"[1] In his view, schools have become the scene of educational atrophy and class struggle, and only as educators change their attitudes and expectations will children of poverty and the ghetto achieve.

Burton, in his writings declared that "the school has generally been geared to the aims, ambitions, moral or ethical standards of the white, prosperous middle-class, Protestant, Ango-Saxon population."[2]

Much of the literature on the disadvantaged zeroes in on the largest minority groups--the Negroes of the inner-city ghetto and the impoverished rural South. However, studies indicate that poverty, with its related social, cultural and psychological concomitants, is the common denominator for the disadvantaged, be they Spanish-Americans of the Southwest,

---

[1]Kenneth Clark, Dark Ghetto: Dilemmas of Social Power (New York: Harper and Row, 1965), p. 131.

[2]William Burton, "Education and Social Class in the United States," Harvard Educational Review 33 (Fall 1953): 248-49.

Appalachian whites or the Alaskan Eskimo. Manuel's study of Spanish-speaking children in five southwestern states details the particular difficulties of these pupils. Entering school they have more to learn than their Anglo-American classmates; a second language and other knowledges and skills foreign to their homes. As he points out,

> They cannot start their schooling at the level already reached by English speaking children. Starting behind and facing greater handicaps, the Spanish-speaking children tend to fall farther and farther behind with advance in grade. The progress of many is hindered by poor attendance resulting from the poverty of the home and the ignorance of their parents. Many find the going too hard in part because the school program is not adapted to their needs, and drop out when age permits them to do so.[1]

Ausubel describes the learning environment of the disadvantaged child as both generally inferior and specifically inappropriate.

> His cumulative intellectual deficit, therefore, almost invariably reflects, in part, the cumulative impact of a continuing and consistently deficient learning environment. Thus, much of the lower-class child's alienation from the school is not so much a reflection of discriminatory or rejecting attitudes on the part of teachers and other school personnel--although the importance of this factor should not be underestimated; it is in greater measure a reflection of the cumulative effects of a curriculum that is too demanding of him, and of the resulting load of frustration, confusion, demoralization, and impaired self-confidence that he must bear.[2]

Obviously, not all poor children are victims of this composite picture of the disadvantaged. Such a dark and depressing picture leaves out the highlights and qualities that enable many poor children to overcome difficulties with marvelous poise. But for the purpose of this

---

[1]Herschel Manuel, Spanish-Speaking Children of the Southwest (Austin: University of Texas Press, 1965), p. 138.

[2]David P. Ausubel, "A Teaching Strategy for Culturally Deprived Pupils: Cognitive and Motivational Considerations," School Review (Winter 1964): 454.

study and for educational reform, it is the shortcomings that matter.

The consequences of these deficiencies is evident at the time many disadvantaged children enter school: a self-feeding cycle of failure leads to impaired self-confidence:

> The lower achievement level may even feed back on the slower development of the originally lowered cognitive skills. A series of interactions between underlying abilities, overt achievement, and inward self-confidence make take place--lower abilities producing lowered achievements, lowered achievements inducing diminished self-confidence, which in turn feeds back upon achievement, and so on. If one adds the devaluations brought about by race-prejudice superimposed on poverty--prejudice, these processes may be accelerated.[1]

The disadvantaged child does bring to school certain strengths--ways of sizing up and handling a difficult environment and a set of values which lock him into a particular culture, such as freedom from family overprotection. Such resources tend to win respect from the school. Teachers must bypass the generalities trap, remembering that individual children will vary considerably in the nature and the extent of their cognitive development, value orientation, motivation and other intellectual, personal, and social characteristics. Any composite picture of deficits suggests the outline of a group, never a single real child.

The conditions related to his social class or minority group membership cause the disadvantaged child to enter school with prior socializing experiences which are different from those of his middle class counterpart. These differences are differences--not defects. They should

---

[1] Martin Whiteman, "Developmental Theory and Enrichment Programs," Harvard Educational Review 38 (Fall 1964): 248-49.

be accepted as the bases for developing strategies and structures in "compensatory education."

Ausubel notes that the disadvantaged child manifests greatest retardation in the area of language development and verbal functioning. He attributes this to the home environment and to parent-child interaction.

> The culturally deprived home . . . lacks the large variety of objects, utensils, toys, pictures, etc., that require labelling and serve as referents for language acquisitions in the middle-class home. The culturally deprived child is also not spoken to or read to very much by adults. Hence, his auditory discrimination tends to be poor and he receives little corrective feedback regarding his enunciation, pronunciation, and his grammar. . . . Furthermore, the syntactical model provided him by his parents is typically faulty.[1]

Hess and Shipman find differences in mental ability and cognitive styles among lower and middle-class groups related to ways parents speak to children and to modes of transmitting information--processing strategies. Their studies suggest that cognitive development is influenced by interactions between mother and young children; that the family's position in the community social structure and the choice of life style available to the parents influence the nature of these interactions; and that the mother's behavior directly affects the development of the child's cognitive style and his orientation to authority. These interactions between child and parent--all part of the socializing process--can either raise or block the young child's ability to adopt the role of pupil when he enters the formality of the school classroom. These parents depict the

---

[1]David Ausubel, "How Reversible Are the Cognitive and Motivational Effects of Cultural Deprivation? Implications for Teaching the Culturally Deprived Child," Urban Education 1 (Summer 1964): 23-24.

school as a place where the child must follow rules and obey the teacher, not as one where he has the opportunity to learn.

> Thus, the initial relationship between the child and teacher is posed in terms of authority rather than interaction and in terms of rules of obedience rather than inquiry and exploration. This early attitude supports and reinforces the passivity of many working class children who come into contact with middle-class institutions. It represents an orientation toward authority and toward learning which has indeed been taught by the mother and by the community environment and which needs to be modified through experience with teachers.[1]

Being culturally deprived very often means being biologically deprived; that is being hungry, underclothed, and in need of medical and dental treatment. Medical and dental treatment are often needed for the individual both because of his general level of poverty--being unable to afford these services—and also because of the fact that the parents of the culturally deprived child or adolescent are very often unaware of the importance of medical and dental care.

Being hungry can have many ramifications. Breckenridge, et al., have reviewed studies demonstrating that insufficient nutrition affects growth, behavior, and mental performance. From these findings we can expect the hungry individual to pay less attention in the classroom than would be desired, and to have a reduced mental effectiveness.[2] The work of Schorr also indicates that malnutrition has an effect on attitudes and behavior. He finds that food deprivation leads to the neurasthenic syndrome: excess fatigue, disturbances in sleep, inability to concentrate,

---

[1]Robert Hess and Virginia Shipman, "Early Blocks to Children's Learning," Children 12 (September-October 1965): 189-194.

[2]Marian Breckenridge, et al., "Nutrition and Growth," in The Adolescent--A Book of Readings, ed. John M. Seidman (New York: Holt Rinehart & Winston, 1962), pp. 97-104.

queer bodily sensations, depression, apathy, loss of ambition, and tendency to transfer blame from oneself to others. Poor housing leads to pessimism, stress, poor general health, loneliness when alone, and a high degree of sexual stimulation.[1]

Because of this biological deprivation, the culturally disadvantaged child or adolescent will be anxious to obtain the wherewithal to satisfy his needs, and will not be willing to expend energy for the promise of things to come if he has the alternative possibility of expending energy to obtain immediate gratification of his basic needs. Thus, the culturally disadvantaged youngster is unwilling to delay gratification. This orientation toward immediate gratification or immediate reinforcement is generally coincident with a high state of biological need. Thus, a general statement about what it means to be culturally deprived or disadvantaged is that it means very often to be biologically deprived and, as a result of this and other training factors, unwilling to delay gratification.

Individuals who are culturally deprived usually score lower intelligence tests according to Klingberg.[2] This does not necessarily indicate that a disadvantaged or culturally deprived individual has a reduced intelgence. The evidence justifies the inference that culturally deprived individuals have less of their intelligence potential developed than do individuals who have not suffered cultural deprivation; thus, such tests are

---

[1]Alex L. Schorr, "The Non-Culture of Poverty," American Journal of Psychiatry 34 (1964): 907-912.

[2]Otto Klingberg, "Negro-White Difference in Intelligence Test Performance: A New Look at an Old Problem," American Psychologist 18 (1963): 198-203.

not valid measures of intelligence for this group. The low score is not native but experiential according to Pettigrew.[1]

Hunt's work has proved to be excellent in bringing together all available relevant literature dealing with the issue of predetermined developmental and fixed intelligence. He points out that cultural deprivation almost always produces less developed intelligence but that remedial treatment or improvement undertaken in the years of childhood, even in early adolescence, can modify the situation substantially.[2] Dramatic modification have been evidenced in the classic studies by Skeels and Dye in which orphans were taken to an institution for the feebleminded and raised by the patients. Gains as high as forty I.Q. points were evidenced.[3] In one Chicago orphanage where tutoring was started, it was learned that over half of the orphans were a year or more below grade. When tutoring was started among those who were behind in school, many youngsters with excellent academic records also requested a tutor. The need to relate to a person outside the institutional setting was strong, regardless of the educational problems involved. Both the low-achieving pupils and the pupils with excellent academic records made significant gains.[4]

A major point contributing to intellectual development is stimulation

---

[1]Thomas Pettigrew, "Negro American Intelligence: A New Look at an Old Controversy," Journal of Negro Education 33 (1964): 6-24.

[2]John Hunt, Intelligence and Experience (New York: Ronald Press, 1964).

[3]Harold Skeels and Helen Dye, "A Study of the Effects of Differential Stimulation and Mentally Retarded Children," Proceedings of the American Association for Mental Deficiency 44 (1939): 114-136.

[4]Harold Baron, "Samuel Shepard and the Banneker Project," Learning Together (Chicago: Integrated Education, 1964), p. 46.

in the home by the parents. Moreover, according to Bloom this factor is of peak importance in the early years of life.[1] The parents themselves in most culturally deprived homes have had little education and are themselves in the situation where their cognitive, perceptual, and verbal skills may be reduced. They are not aware of many instruments of education that are available for use in the home and they do not have the time and the skill to carry on conversations with their children which are necessary to develop verbal skills. Deutsch, in his examination of homes in depressed areas finds few educational objects and a general absence of parental stimulation appropriate for cognitive, perceptual, or verbal development. He found very little outside of the bare necessities of life.[2]

John also concluded that the "acquisition of more abstract and integrative language seems to be hampered by the living conditions in the homes of lower-class children."[3] Another statement about cultural deprivation, then is that it produces reduced intelligence as a function of lesser cognitive, perceptual, and verbal skills.

Another characteristic that is most frequently associated with the culturally disadvantaged is an absence of achievement motivation. Achieve-

---

[1]Martin Deutsch, "The Disadvantaged Child and the Learning Process," in Education in Depressed Areas, ed. A. Harry Passov (New York: Teachers College, Columbia, University, 1963), pp. 163-180.

[2]Benjamin Bloom, Stability and Change in Human Characteristics (New York: John Wiley & Sons, 1964).

[3]Vera P. John, "The Intellectual Development of Slum Children: Some Preliminary Findings," American Journal of Orthopsychiatry 33 (1963): 813-22.

ment motivation, which has been widely described in the works of McClelland[1] refers to the desire on the part of the individual to achieve either for the intrinsic satisfaction associated with achievement or for the rewards society gives out as a function of achievement behavior. This is very strongly associated with the middle-class as he further points out. As a generalization it can be stated that cultural deprivation usually means having little achievement motivation.

Cultural deprivation has implications in another general area and that is of attitudes toward self, toward others, and toward the world.

On a one to one basis most disadvantaged children are very friendly, but in a class situation the relationship may radically change. They are restless and impulsive. They cannot tolerate waiting and have a voracious desire for excitement. They easily get disconcerted and "fly off the handle." According to Ornstein[2] disadvantaged children of junior high school age are perhaps the most difficult to deal with. By then, many are rebellious and too retarded in basic skills to learn in a regular classroom situation. These children in particular demand a strict structured, workable routine.

We first see the culturally deprived child when he is three or four years old--in places such as Head Start programs. It seems unreasonable to believe that his problems at age three or four appear full blown at that time. Yet we simply do not know in any detail what happened to children in disadvantaged environments before they turn three. In fact, as Caldwell[3]

---

[1]David McClelland, The Achieving Society (Princeton: Van Nostrand, 1964).

[2]Albert Ornstein and Phillip Vairo, How To Teach Disadvantaged Youth (New York: David McKay Company, Inc., 1967), p. 139.

[3]Bruce Caldwell, "The Effects of Psychological Deprivation on Human

and White[1] point out we know next to nothing about what happens to children in adequate environments in those years.

We do have many plausible hypotheses concerning the antecedents of the cultural deprivation syndrome. There are hypotheses about protein deprivation, about differentiated noise, and about the adaptive consequences of poverty, to name just a few.

To borrow a phrase from Bloom, Davis and Hess, it may be said that the implication of cultural deprivation for education is to produce individuals with an absence of learning to learn capability.[2] This learning to learn capability is apparently what Harlow called a "learning set."[3]

Being culturally deprived means not having learned to learn in many cases. When the culturally deprived child goes through school his situation only worsens. By the time adolescence is reached the culturally deprived student, according to data collected by Osborne[4] shows reduced reading skills and reduced skills in arithmetic.

By blending together all of the studies on the disadvantaged which were reviewed by this researcher, a composite portrait of the characteristics of the disadvantaged as a group emerges.

a. Language inadequacies, relating both to vocabulary and

Development in Infancy," Merrill-Palmer Quarterly 16 (1970): 260-277.

[1]Bernard White, Human Infants: Experience and Psychological Development (Englewood Cliffs, N. J.: Prentice-Hall, 1971), p. 124.

[2]Benjamin Bloom, Allison Davis and Robert Hess, Compensatory Education for Cultural Deprivation (New York: Holt, 1965).

[3]Harry F. Harlow, "The Formation of Learning Sets," Psychological Review 56 (1949): 51-65.

[4]Robert Osborne, "Racial Differences in Mental Growth and School Achievement; Longitudinal Study," Psychological Reports 7 (1960): 233-239.

syntactical structure; inability to handle abstract symbols and complex language forms, both in interpretation and communication; difficulties in developing and maintaining verbal thought sequences; restricted verbal comprehension.[1]

b. Unfamiliarity with formal speech patterns; dialects setting them apart from the mainstream; standard English as a second language.[2]

c. Visual and perceptual deficiencies, including problems of spatial organization and lateral orientation.[3]

d. A mode of expression which tends to be more motorial and concrete, rather than conceptual and idea symbol-focused.[4]

e. An orientation to life that seeks to have immediate gratification in the here-and-now rather than ability to delay for future advantage.[5]

f. A low self-image, denigrating one's potential both as a person and as a learner.[6]

g. Modest aspirations and low motivation to achieve those academic goals which the school rewards; apathy and detachment from formal educational goals and processes.[7]

---

[1]Deutsch, Education in Depressed Areas, pp. 163-180.

[2]Vera P. John, "The Intellectual Development of Slum Children: Some Preliminary Findings," pp. 813-22.

[3]Herschel Manuel, Spanish-Speaking Children of the Southwest, p. 138.

[4]Marian Breckenridge, "Nutrition and Growth," pp. 97-104.

[5]Otto Klingberg, "Negro-White Difference in Intelligence Test Performance: An Old Problem," pp. 198-203.

[6]David McClelland, The Achieving Society, 4: 57.

[7]David P. Ausubel, "Implications for Teaching the Culturally Deprived," pp. 23-24.

h. Limited role-behavior skills and inadequate or inappropriate adult models.[1]

i. Restricted attention span and general inability to cope with the demands and expectations of the school programs and personnel.[2]

Characteristics of Disadvantaged Institutionalized Pupils

In addition to the characteristics of disadvantaged pupils described in the preceding section, it was found that the institutionalized children had certain identifiable problems that required special services beyond those of the community children who could also be classed as disadvantaged. For this reason, a full-time counselor was added to the staff of the school. Most of the problems were the result of incidents that had happened to the youngsters before they were assigned as wards of the court and brought to the institution to live. All of the children in the institution came from disadvantaged backgrounds. But all of the children were not orphans. Some were children who had been abused and abandoned by their parents. Some were children who had been assigned to the institution because they could not get along with their parents. Many were charged with anti-social behavior and as a result were taken from their homes and instead of going to Juvenile Detention Homes were assigned to the institution. Their anti-social behavior labels came from such acts as stealing, breaking and entering, destroying private and public property, truancy, fighting with teachers, cursing and inability to cope with the

---

[1] William Burton, "Education and Social Class in the United States," pp. 248-249.

[2] Mario D. Fantini and Gerald Weinstein, The Disadvantaged: Challenge to Education, pp. 1-37.

typical home situation.[1]

With backgrounds characteristic of those listed above the regular school program left much to be desired in trying to cope with the needs of these boys and girls.

Many of the boys and girls had severe emotional problems. Some were multiplied by being removed abruptly from their own homes and placed in a home with dozens of their peers having the same or similar problems. One of the greatest needs was that of having someone to supply them with individual attention. Some of the pupils would go to great lengths to get this attention. Misdemeanors on campus such as cutting class, fighting, cursing, stealing, and being generally disobedient and belligerent were the order of the day. While some of these same problems existed among the community disadvantaged, the volume of such problems passing through the counselor's office was almost tripled with referrals for the institutionalized children.[2]

Because of the need to remove the institutionalized pupils from class due to anti-social behavior, many of them fell below the regular school average as measured by the ITBS. While the typical disadvantaged pupils were a grade below the average, the institutionalized children ranged from two to three grade levels below the average community children.[3] Many of the institutionalized children had been in three or four schools per year

---

[1]Faculty and staff conferences held during regular staff meetings of Title I Personnel. Atlanta, Georgia, May, 1974.

[2]Ibid.

[3]Atlanta Public Schools, Annual State Testing Program, Report by Schools of Iowa Test of Basic Skills, May, 1974.

before coming to the institution to live. Some could neither read nor write although they were in their fifth or sixth year of school. This was due in part to the erratic patterns of school attendance evidenced by the permanent record folders of the pupils. Another factor complicating the lives of the institutionalized children comes about due to the problem of living in a large group setting. While the community children have a break in regimentation by being allowed to let-down as far as following rigid schedules which require one to move from activity to activity by the clock, there is no break in routine. Meals must be taken on time, recreation and television viewing as well as getting up and going to bed of necessity must all be scheduled. Disadvantaged children in private dwellings do have a great deal of flexibility when school is not in session, in fact some are free to do pretty much as they please. These differences are noted most of all on the first day of school following weekend or holiday vacations. The counselor's office is full and the teachers work exceptionally hard to curb the extra problems that are evident at this time.

To sum up the problems and characteristics of the institutionalized disadvantaged, they are often hostile, poorly adjusted, low-achievers, delinquent, truant, and belligerent. Most have poor self-concepts and because they have not had much success in school, most of them have poor attitudes towards school and towards the faculty and staff of the school.

Models and Programs for the Disadvantaged

Major responsibility for improving the situation remains with the school administrators and program developers. Enrichment programs such as Headstart at the preschool level are necessary so that deprived

youngsters do not enter school with such a large deficit. Enrichment and remedial programs are necessary through high school.

In the state of Michigan the Detroit Project utilized professional workers, smaller classes, systematic attempts to change the attitudes of parents, and community involvement to increase academic achievement.[1] Better counseling and guidance are also necessary at the elementary and middle school levels. The headstart model provides training for the youngsters prior to entry into the kindergarten and the first grade. This model was funded by the U. S. government.

The Bereiter-Englemann model is based on an analysis of the formal characteristics of language, reading and arithmetic--the elemental information processes required for thinking. These analyses are translated into instructional goals. "Subjects," which they perceive as different areas of application of the same basic information processes, are taught in three twenty minute periods daily interspersed with a half-hour for refreshments and singing and a shorter period for unstructured activities. The children are grouped for instruction on the basis of their overall rate of progress, with frequent shifts as individual achievement levels change. Language instruction seeks to implant grammatical statement patterns and a grasp of the logical organization of these patterns. Arithmetic is taught through language operations. Reading is taught as a logical process with children being given a maximum amount of experience. Emphasis is placed upon effort, attention and mastery, but not upon competition, as is so damagingly done in many of our achievement-oriented

---

[1]Arthur Burrichter, Special Techniques That Work in Teaching the Culturally Deprived (Englewood Cliffs, N. J.: Prentice-Hall, 1972), p. 18.

elementary schools.[1]

The Experimental Preschool Project at Indiana University bases a language development program on diagnostic information from psychosocially deprived children. Hodges and his associates assume that elaborate representational language is necessary to the development of symbolic thought, to verbal mediation skills and to school success. Language lessons are the spine of the program, controlling the curriculum and offering opportunities for testing and subsequently modifying both the techniques and the content.[2]

One of the earliest research and developmental programs for culturally deprived youth is that of the Institute for Developmental Studies under the direction of Martin Deutsch. The IDS, as it is commonly called, has six specific purposes:

1. To determine whether children with specific ability patterns are particularly responsive--or--unresponsive to the enrichment program itself, and whether these ability patterns are in turn related to patterns of environmental deprivation.

2. To determine how such a program will influence and modify the intellectual performance and eventual academic achievement of disadvantaged children, especially those enrolled in ordinary public school classes.

3. To determine whether the increased "success" experience provided by this program will promote positive attitudes toward society and self and raise aspirations.

4. To develop a teacher-training program based on an educational and psychological understanding of the disadvantaged child.

---

[1]Carl Bereiter and Siegfried Englemann, Teaching Culturally Deprived Children in the PreSchool (Englewood Cliffs, N.J.: Prentice-Hall, 1966), pp. 75-84.

[2]Institute for Developmental Studies. Annual Report 1965. New York: Institute for Developmental Studies, New York Medical College, 1966.

5. To promote an early and meaningful parent-school interaction so that formerly uninvolved parents may be assisted to supplement and reinforce school goals and values.

6. To develop a "therapeutic curriculum" in language, math, science, reading skills, and concept formation.[1]

In assessing the effects of the enrichment program, the Institute has fashioned evaluation techniques to delineate the disadvantaged child's specific cognitive, verbal, perceptual, and motivational abilities; to measure the effects of enrichment techniques in compensating for specific deficit patterns; to assess the consequences of teacher behavior; and to index relevant factors in the child's environment and relate these to patterns of teaching and learning.[2]

The Office of Economic Opportunity has served as a model for many of the programs for the disadvantaged. Some of the aims of these programs are listed below.

1. Improving the child's health.

2. Helping the child's emotional and social development by encouraging self-confidence, self-expression, self-discipline, and curiosity.

3. Improving and expanding the child's ability to think, reason, and speak clearly.

4. Helping children to get wider and more varied experiences which will broaden their horizons, increase their ease of conversation, and improve their understanding of the world in which they live.

5. Giving the child frequent chances to succeed. Such chances may thus erase patterns of frustration and failure, especially fear of failure.

6. Developing a climate of confidence for the child which will make him want to learn.

---

[1] Ibid.

[2] Ibid.

7. Increasing the child's ability to get along with others in his family and, at the same time, helping the family to understand him and his problems, thus strengthening family ties.

8. Developing in the child and his family a responsible attitude toward society and fostering feelings of belonging to a community.

9. Planning activities which allow groups from every social, ethnic and economic level in a community to join together with the poor in solving problems.

10. Offering a chance for the child to meet and see teachers, policemen, health and welfare officers--all figures of authority--in situations which will bring respect, and not fear.

11. Giving the child a chance to meet with older children, teenagers, and adults who will serve as "models" in manners, behavior, and speech.

12. Helping both the child and his family to a greater confidence, self-respect, and dignity.[1]

Boger was able to improve visual perception necessary for perceptual discrimination, in the case of culturally deprived students. He used jigsaw puzzles requiring visual perception. This helped to increase intelligence test scores by developing perceptual discrimination.[2]

Brazziel and Terrell produced improvement in pupil readiness by using educational television.[3] Schreiber reports that the Higher Horizons Program in Manhattanville was able to produce dramatic gains for lower-class students. Remedial programs, tutoring, parent education and

---

[1] Project Head Start. Head Start Child Development Programs. Washington, D.C.: Community Action Program. Office of Economic Opportunity, 1966.

[2] John Boger, "An Experimental Study of the Effects of Perceptual Training on Group I.Q. Scores of Elementary Pupils in Rural Ungraded Schools," Journal of Educational Research 46 (1952): 43-53.

[3] William Brazziel and Mary Terrell, "An Experiment in the Development of Readiness in a Culturally Disadvantaged Group of First-Grade

vocational guidance were some of the components of the Manhattanville project.[1]

The original aim of this program was to "identify, stimulate, and guide into college channels able students from low socio-economic homes." The project was later expanded to include all levels of students. The philosophy of the program is outlined below:

> Many children from families of low socioeconomic status do not reach their maximum achievement level in the ordinary school program. Handicapped by culturally impoverished homes that lack an education tradition, they often record scores on tests of mental ability that do not reveal their full intellectual potential. Nor do such children usually match their academic achievement demonstrated by their more privileged fellow pupils of comparable ability.
>
> The needs of children living in culturally and economically depressed areas are especially acute since for most of them, school is their only positive experience in life.[2]

The program stressed a number of outstanding features:

1. A variety of instruments were utilized, including a non-verbal I.Q. Test.

2. Pictures of Negro and Puerto Rican doctors, nuclear physicists, and journalists were displayed in the classrooms to instill motivation and improve the children's self-image.

3. Special remedial reading classes of five and six pupils each were organized to improve the basic reading deficit.

4. Book fairs and circulating libraries of paperbacks were started in the school to stimulate reading.

5. An intensive counseling service was established to provide guidance concerning college and career capabilities.

Children," Journal of Negro Education 3 (1962): 4-7.

[1]David Schreiber, "Identifying and Developing Able Students From Less Privileged Groups," High Points 40 (1958): 5-23.

[2]Ibid., p. 28.

6. An intensive cultural program was initiated to acquaint the children with "good music," etc., and to broaden their tastes.

7. Classrooms were opened after school hours giving children who came from crowded, noisy homes, the opportunity for quiet study.[1]

In summary, the Higher Horizons Model represents a giant step forward, but it does not go far enough. It considers the problems and conditions of the deprived person's life, but it does not stress the culture, the coping mechanisms, the "positives" of the underprivileged. However, it does demonstrate that the culturally deprived can be educated.[2]

Loadman and Parks developed an educational model involving regular and special education teachers in management plans for disadvantaged students. The model was designed to augment the regular program of the classroom. The teachers worked on specific skills with specific children who were then sent back to the regular classrooms. Significant improvement was made in areas of the curriculum which were stressed.[3]

The major programs and models for compensatory education have come in the elementary schools, especially in the early grades, where a varied array of programs and practices are to be found. Few if any of them are "new"; they are simply rare in schools serving children who may be classed as disadvantaged.

Perhaps the most notable curricular emphasis is on reading and

---

[1]Ibid., p. 33.

[2]Ibid., p. 37.

[3]Walter Loadman and Anne Parks, "Increasing the Academic Performance of Culturally Disadvantaged Students: A Diamond Among the Glass or the Possibility of a Type I Error." Paper presented at the

language arts. There are wide differences among the programs in theoretical orientation and teaching strategies, but the major stress is universal.

Siegel and Olmsted describe their experimentation with programs designed to improve classification training among disadvantaged Black kindergartners. They found that classification training did enhance the child's ability to use these skills, although simple exposure to verbal experiences did not.[1]

Almost all of the programs and models stressed community involvement. Home visits by teachers, parental participation in field trips, meetings of parents, in addition to overall parent-teacher meetings, are among the approaches being used.

Summary of the Survey of Related Literature

The literature pertinent to this study may be found in the epitomized statements below:

1. The term "disadvantaged" is probably the most widely used term at the present to refer to populations to be served by special programs designed for low-income people.

2. Much of the literature on the disadvantaged zeroes in on the largest minority groups--the Negroes of the inner-city ghetto and the impoverished rural South.

3. Some researchers blame pupil failure on ineffective teaching by a rejecting staff.

4. The learning environment of the disadvantaged is generally inferior and specifically inappropriate.

Annual Meeting of the American Educational Research Association (59th), Chicago, Illinois, April, 1974.

[1]Irving E. Siegel and Patricia Olmstead, "Modification of Classificatory Competence and Level of Representation Among Lower-Class Negro Kindergarten Children," in Reaching the Disadvantaged Learner, ed. A.

5. Being culturally deprived often means being biologically deprived.

6. A major point contributing to the intellectual development is stimulation in the home by the parents.

7. Programs for the disadvantaged stress a variety of different features.

8. No one program has been found that will meet the needs of each group of the disadvantaged.

9. More research needs to be done on institutional children attending public schools.

10. The existing models for disadvantaged need constant revision to accommodate the changing status of this group.

The literature has concerned itself with a description of the disadvantaged. The description was depicted as it relates to limited reading ability, the fear of failure, the inadequate test-taking skills, the lack of school know-how, little initiative and inability to communicate adequately in a middle-class situation.

Researchers appear to be in agreement over the need for continued research and the development of models designed to modify inappropriate behavior and attitudes of the culturally disadvantaged.

Harry Passow (New York: Teachers College Press, 1970), pp. 57-83.

CHAPTER III

METHODOLOGY AND PROCEDURES

Introduction

There were several stages of development in conducting the experiment. The first stage of development involved the selection of the components to be included in the model. The second stage involved the selection of the measuring instruments used in the experiment.

Upon completion of the first and second developmental stages, the experimental design was selected. The third developmental stage involved the selection of the control and experimental groups used in the study. At this point, it was determined that students residing in two institutions for orphaned children and attending public schools in Atlanta, Georgia would be appropriate subjects for the experiment.

The fourth stage of development was the administration of the pre-experiment observations, the application of the model, and the administration of post-test observations. The study took place during the first quarter of the 1974-75 school year in the Atlanta Public School System in Atlanta, Georgia. The fifth stage of development in the current study involved the analysis of the data and the reporting of the findings and conclusions.

Chapter III deals with a detailed discussion of the first four stages of development in the experiment. The following chapter concerns itself with the analysis of the data and the reporting of the findings

and conclusions.

The Components of the BICYC Model

There were five components included in the model. The five components were:

1. Behavior Modification
2. Individualization of Instruction
3. Campus Parents
4. Youth Tutoring Youth
5. Counseling

The components of the model were selected for their potential to aid in reaching the goals of the study: namely, to increase the level of academic achievement and to bring about significant changes in the attitude towards school for the experimental group. The Behavior Modification, Campus Parents and Counseling components were selected to aid in the development of the affective areas. Individualization of Instruction and Youth Tutoring Youth components were selected for their proven value in assisting in the raising of the level of cognitive skills. All components were selected for the one to one relationships inherent in implementing them. Although each of the components was selected for one particular function it was easy to see how the components were interrelated. When one is made to feel good about himself and to feel that others are interested in him, he begins to try just a little harder. This is what appeared to happen during the administration of the BICYC model.

The components of the model were selected basically to aid the students to exhibit changes in affective as well as in cognitive behavior.

The Behavior Modification. This component involved the use of

tangible and intangible rewards for successfully completing the assigned tasks as well as for exhibiting satisfactory behavior in a variety of situations. This component is based on an analysis of the relationship between a behavior and the variables which control it. Some of the basic principles include the following:

1. Specify the final performance the teacher wants.
2. Determine the baseline level.
3. Structure a favorable situation.
4. Establish motivation for the students.
5. Shape the desired behavior.
6. Reinforce on an intermittent schedule.
7. Build stimulus control through fading.
8. Keep continuous objective records.

All teachers in the experimental situation received training in Behavior Modification techniques by staff members of the Atlanta Public Schools. The principal of the school along with the Lead Teacher and the Counselor attended a four day workshop and were required to assist in the training of the teachers in the local school.

The regular program of the school was followed with all phases of the curriculum being enriched through the addition of the Behavior Modification Component.

Two Fun Rooms were set up and students earned the right to play games or to goof off on school time. Thursday and Friday afternoons were divided into twenty minute segments for this purpose. Beginning at 1:30 small groups were allowed to enter the fun room. The pupils received check-marks on specially designed cards. The cards, when filled could be exchanged for twenty minutes time engaged in an activity of their

choice in the fun room. Tasks to be completed were designed to increase cognitive and affective growth.

One of the greatest difficulties the teachers encountered was that of ignoring bad or unruly behavior. As the program progressed, however, this task became easier. Some teachers evidenced difficulty though, throughout this phase of the program.

No specific materials or equipment were especially needed for this component. The teachers did become more aware of the value of the materials and equipment on hand and were more judicious and zealous in their use of the existing items. Some teachers said they worked harder, but discipline problems faded and the pupils seemed to be progressing more at their own pace instead of trying to compete with others.

Charts were kept in some rooms in order for pupils to record their own progress and to be aware of how they were doing in comparison with other students. Teachers found that they had time to spend on a more regular basis with each student.

From all observations this phase of the program was a success. Most of the teachers are continuing to engage in this component.

The Individualization of Instruction Component. This component was used as a procedure for providing a unique program for each child. The objective of individualization is to take into account all of the differences that exist in body chemistry, experiential background, specific interests, purposes, personal needs, and learning skills and styles among students. Having identified these differences, the teacher then strives to offer unique learning experiences to provide for this perplexing diversification. This approach is based upon the teacher's total

philosophy of education of children, and of teaching and learning. In reality a teacher cannot be an individualized teacher, he can only try to provide optimum conditions for an individualized learner. He can guide the student toward the realization of his own ability. The pupil must become involved, experience the excitement, and respond to this involvement. He is an unique and individual learner.

Some advantages of individualized instruction include:

1. It takes into account variations in learning styles as well as ability and background.
2. The student may go as far as he can at his own rate.
3. Provisions for enrichment and remedial work is a natural part of the program.
4. The unique talents and qualities of each student are more easily recognized.
5. Initiative and creativity are developed.
6. The student feels that he is important because the teacher is giving him personalized attention.
7. Greater enjoyment in work results in a decrease in disciplinary problems.
8. Close association humanizes learning and teaching.

The Campus Parents Component. This component was developed by the researcher to enable the students to have someone with whom they could relate on a one-to-one basis. The teachers were used as parents for the students for the period of the experiment.

Motivation may be referred to as an energizer or drive which is regulated by a non-stimulus source. The goals that people set for themselves make up their motivational systems. The parents usually help children to want and to accept the basic goals of the school. Children need parents. Parents are essential for the development of a healthy

personality in either boy or girl. A child is born without a sense of right or wrong. He acquires these senses by imitating his parents as well as by staying within the limits they impose. Needing their care and love. Children who are shifted from home to home, or who live with adults with whom they have little intimacy, are robbed of an essential ingredient of normal development--the sense of security that comes with belonging.[1]

Another source of insight into the importance of the parent to the child is provided by caseworkers' experience with children who have been separated from their parents. Caseworkers have observed that often children were unable to form attachments in their new surroundings, but felt and behaved like strangers so that the attributes of the new home were of little benefit to them. Studies show that separation of children from their parents, even when it is unavoidable, is a traumatic experience that cannot be compensated for by the advantages of substitute care. That children mourn separation from their families has been reported by many who have worked with children in capacities other than as caseworkers. Teachers, for example, have reported the preoccupied lethargic appearance of children in institutions.[2]

From the child's point of view, having only one parent may not be entirely satisfactory, but nonetheless it is better than having to live in a home other than his own.[3] It seems, therefore, that to the child the most important factor in life is that he have a sense of belonging;

---

[1]H. L. Witmer and Ruth Kotinsky, Personality in the Making (New York: Harper and Brothers Publishers, 1962), p. 127.

[2]Ibid.

[3]Ibid., p. 130.

and this then is the basis for the Campus Parent Component.

There were no "formal" lesson plans for the teachers who agreed to serve as Campus Parents. They were to be available when needed before and after school and when needed to offer comfort and advice during the school day. The idea behind it all was to develop within the child a sense of well-being, a sense of belonging, a better self-concept and the realization that someone is near who cares and has his personal interest at heart.

The teachers were free from responsibility for the students in the evenings and on the weekends but were there to offer the necessary words of encouragement during the school hours as well as to offer suggestions to the other teachers that might help to ward off undue conflicts later. The pupils were divided among all available staff members. Teacher-pupil preferences guided the selection process.

Several teachers took their children home for weekends or for short overnight visits to their homes. Others provided various materials that the children might have wanted for school but did not necessarily need. In most instances the pupils and teachers were favorably matched. It was hoped that the teachers would show love for the students and yet would have the ability to guide them firmly yet with flexibility. This component of the model seemed to be the most cumbersome, with no clear-cut way of evaluating the affective results.

The general consensus of the teachers and the pupils was that it was a success. Proof of this fact is that after the experiment ended most teachers have voluntarily kept the relationship established during the study. Teachers who were not originally assigned to any children

have taken it upon themselves to establish a close relationship with one or more of the institutional children.

The Youth Tutoring Youth Component. This program was originally designed to be used with high school students serving as instructors for elementary school pupils. It began as a project with emphasis on increasing reading and mathematic skills of the tutor on the high school level and the tutee on the elementary level. The high school student who was selected to serve as instructor, in most cases was performing below grade level. The high school student was given an extra chance to go over all of the material with a Center Leader before he used it with his tutee. This helped to build self-confidence in the tutor and served as a check on the appropriateness of the material to be used.

In order to determine the activities that the tutors would use for instructional purposes with the tutees a profile was designed for each of the students in the experimental group. Lesson Plans which served as the components of the Youth Tutoring Youth instructional units were structured to allow for flexibility. However, each weekly plan contained specific goals and objectives in accord with the individual prescription for each pupil. Close adherence to these prescriptions was necessary due to the desire to impose a high degree of control on the experiment. Flexibility centered around the choice of materils to accomplish the instruction in a specific skill.

The general objectives of the YTY activity included the following:

1. To complement the education of tutors and tutees by stimulating interest and improving learning, mainly in the areas of reading and language arts.

2. To significantly improve the self-image of the tutors as well as that of the tutees.

3. To provide models for underachieving elementary pupils.

4. To provide an experience that will lead to improvement in behavior in school and in attitude toward school.

5. To provide learning experiences for tutors and tutees through games and other competitive activities.

This activity was designed to extend and reinforce the regular school program. The tutees were required to remain for one hour after the regular school day ended. The tutors remained for an extra hour after the tutees were dismissed. This coupled with a two weeks workshop before school opened for the Fall term provided the time for the tutors to receive instructors in working to the best advantage with the tutees. This time was also spent in preparing games to teach the skills, developing materials, utilizing words and problems from situations within the environments of the pupils.

The tutors worked under the supervision of an aide. The aide received continuous assistance from a certified teacher as well as from the researcher. The aide and the supervising teacher evaluated the strengths and weaknesses of the tutors and of the tutees.

One field trip was taken in the course of the experiment and it was used to enhance the writing and language experience stories written by the children.

The equipment supplies and materials that were used consisted of the following:

1. Dolch Word Games

    a. The Syllable Game
    b. What The Letters Say
    c. Basic Sight Game
    d. Popper Word Sets I and II
    e. Group Sounding Game
    f. Consonant Lotto
    g. Vowel Lotto
    h. My Puzzle Book I and II

2. Lyons Carnahan

   a. Reading Games
   b. Spelling Games
   c. Phonics We Use Books A-E

3. Macmillan Company

   Spectrum of Skills

4. Reader's Digest

   Reader's Digest Skill Builders

5. Science Research Associated, Inc.

   a. Reading Laboratory I-II-C
   b. Spelling Laboratory I-II

6. Webster-McGraw

   Webster Classroom Reading Clinic

7. Filmstrips, records, tapes, cassettes, radios, televisions, movie projectors, and all other equipment available through the resources of the Atlanta Public School Systems were used.

To eliminate duplication of reading materials used in the regular classroom setting, easy books were selected from the school library. Tutors also selected books from the neighborhood branch of the public library. The pupils were also encouraged to bring their favorite books including comic books. This phase of the program is being continued because of the positive benefits that have accrued for both the tutors and the tutees.

Counseling Component. The counselor regularly assigned to the school kept a checklist based on the amount and types of infractions of school rules necessitating referrals to the counseling center. A look at this suggested that the greatest amount of the counselor's time was spent with problems concerning the institutional children. For that reason, the counseling component was added to the model.

The counselor set up regular sessions at which time he showed films designed to make students aware of the desired behavior. He counseled them concerning the rules of the school community. Just as individualized instruction provides a method for meeting the intellectual and skill needs of each student, so individualized methods may be used in dealing with unacceptable classroom behavior.

Numerous books, pamphlets, rules, and guides have been written by and for teachers and administrators, suggesting ways to improve and maintain discipline in the classroom. Most of these suggestions rely on "super-subordinate" definitions of discipline rather than the notion of self-discipline.

Emphasis during the experimental program was on self-discipline. Prior to the inception of the model at least one of the institutional children was sent home each week for misbehavior. One or more of the incidents listed on the check list was involved (see Table 44).

Materials from the Guidance Association were distributed to the teachers to use with their classes while the counselor held pre-scheduled sessions with all of the institutionalized children. During these sessions students were given an opportunity to voice their opinions, express themselves in turn and to receive individual counseling and advice from the counselor. The counselor was also available to help with homework, to take a sick child back to the institution and to transport children in need of dental work or other special services to their destination.

Another task assigned to the counselor was that of making the institutional children more test-conscious--that is helping them to understand the language of the tests to know what it is they were expected

to do.

Disadvantaged children, according to Tyler, as especially deficient in what might be called "school-know-how."[1] By this is meant the subtle expectations concerning various procedures in the school which the average middle-class child usually learns without realizing it, from his parents and general environment. By contrast, the institutional child frequently has not learned how to ask and answer questions, how to study, how to relate to the teacher, how to take tests.

The counselor also provided the students with materials designed to help improve their self-image and their attitudes towards school.

On his own time, the counselor arranged to take the institutional children to events of interest that took place around the city. This included events at the Omni, the Stadium and the Atlanta University Center. He arranged for some of them to secure part-time jobs such as cutting grass and washing cars. He expected them to do a thorough job and was quick to let them know when they had done a satisfactory job. By the same token he would reprimand them when they had not done as well as could be expected of them.

Administration of the BICYC Model

The BICYC model was administered to the experimental group by the faculty and staff of the school in which the group was enrolled. During this period the researcher served in the role of participant observer at

---

[1] R. W. Tyler, "Can Intelligence Tests Be Used to Predict Educability?" in Intelligence and Cultural Differences, by Kenneth Ells, et al., (Chicago: University of Chicago Press, 1964), p. 45.

the administrative level of group interaction. At all times when the experimental plan was being tested, the researcher was able to insure adherence to the activities outlined in the model.

Constant monitoring through classroom visitations and conferences with the school staffs insured that: (1) students enrolled in the control group had no exposure to the model as administered to the experimental group. (2) Students in the experimental and control groups belonged to the same population before the model was administered. (3) There was close adherence to the model by the experimental group during the period of the study.

Summary

Chapter III has provided a detailed discussion of the methods and procedures employed in the realization of the study's objectives. As previously noted, the major aspect of the study involved the development and validation of a model for school success for institutional children attending public schools. The model consisted of the following components: (1) Behavior Modification, (2) Individualization of instruction, (3) Campus Parents, (4) Youth Tutoring Youth, and (5) Counseling.

Once the model was prepared, steps were taken to collect the data. Pre and Post test data were secured from the Iowa Test of Basic Skills as a measure of academic achievement. The School Sentiment Index was used for a measure of attitude change for pre and post testing.

The design for the study consisted of one experimental and one control group. Subjects in the groups were residing in orphan institutions and were enrolled in Atlanta Public Schools.

A total of sixty-six pupils were included in the study. The group ranged in age from eight to fourteen years. Male and female and black and white children were included in both the experimental and control groups.

CHAPTER IV

RESULTS AND DISCUSSION OF THE FINDINGS

Chapter IV is concerned with a report of the study's findings and a discussion of those findings as they relate to the null hypotheses. A summary of the findings is provided at the end of the chapter.

The data were obtained from the administration of the Iowa Test of Basic Skills and the School Sentiment Index. The data were organized after collection into proper tables, treated statistically, analyzed, and interpreted.

This chapter is organized into the following major sections:

1. Distribution of Gains on the Iowa Test of Basic Skills Analysis of Variance and "F" ratios.
2. Distribution of Scores on the Pre-Test School Sentiment Index Analysis of Variance and "F" ratio.
3. Distribution of Scores on the Post-test School Sentiment Index Analysis of Variance and "F" ratio.
4. Correlation Coefficients, "z's" and "t" ratios for the significance of Difference Between SSI and Gains in Achievement on the Iowa Test of Basic Skills.

These data were analyzed and interpreted at the .05 level of significance. The "t" ratios obtained were for the significance of the difference between correlation coefficients. The correlation coefficients were interpreted against a criterion "r" at the one per cent level of confidence and 18 degrees of freedom at .561.

Testing the Hypotheses

The hypotheses used in this study were stated in the null form with the probability level established at the .05 level of significance.

H_{0_1} There is no significant difference in academic achievement between students who receive the experimental procedures and the group that does not.

In order to test the first hypothesis, data were compiled from the administration of pre and post test scores on the Iowa Test of Basic Skills. Tables 2-16 report the distribution of achievement gains on the Iowa Test of Basic Skills for the experimental and control groups. Means, per cent of subjects scoring above, below and in the interval of the mean were obtained for all sub-tests. The sub-tests included: Vocabulary, Comprehension, Spelling, Capitalization, Punctuation, Language Usage, Map Skills, Graphs and Tables, Math Concepts and Math Problems.

Tables 17 and 18 summarize the data presented in this area.

An analysis of variance was used to treat the data to determine whether the treatment had influenced the cognitive level of the experimental group in comparison to the control group. Analysis of this data yielded no significant differences between the experimental and control groups.

Tables 19-33 present the analysis of variance results from the data secured from the Iowa Test of Basic Skills.

TABLE 2

DISTRIBUTION OF GAINS ON THE VOCABULARY COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
1.2 - 1.4	1	2.4	0	
.9 - 1.1	1	2.4	2	8.7
.6 - .8	6	14.3	1	4.3
.3 - .5	9	21.4	1	4.3
.0 - .2	21	50.0	14	60.9
-.3 - .1	2	4.8	1	4.3
-.6 - -.4	0		3	13.0
-.9 - -.7	1	2.4	0	
-1.2 - 1.0	0		1	4.3
-1.5 - 1.3	0		0	
-1.8 - 1.6	1	2.4	0	
Total	42	100.1	23	99.8
Mean	.22		.24	
Range	-1.8 - +1.3		-1.0 - 1.0	

TABLE 3

DISTRIBUTION OF GAINS ON THE COMPREHENSION COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
2.1 - 2.3	1	2.4	0	
1.8 - 2.0	2	4.8	2	4.7
1.5 - 1.7	1	2.4	3	13.0
1.2 - 1.4	1	2.4	1	4.3
.9 - 1.1	0		1	4.3
.6 - .8	4	9.5	2	8.7
.3 - .5	6	14.3	2	8.7
.0 - .2	11	26.2	3	13.0
-.3 - -.1	8	19.0	2	8.7
-.6 - -.4	4	9.5	3	13.0
-.9 - -.7	2	4.8	1	4.3
-1.2 - -1.0	0		1	4.3
-1.5 - -1.3	0		1	4.3
-1.8 - -1.6	2	4.8	0	
-2.1 - -1.9	0		1	4.3
Total	42	100.1	23	99.6
Mean	.17		.28	
Range	-1.6 - 2.3		-2.0 - 1.9	

TABLE 4

DISTRIBUTION OF GAINS ON THE SPELLING COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
3.0 - 3.4	1	2.3	0	
2.5 - 2.9	0		1	4.3
2.0 - 2.4	2	4.7	0	
1.5 - 1.9	4	9.3	1	4.3
1.0 - 1.4	4	9.3	5	21.7
.5 - .9	7	16.3	5	21.7
.0 - .4	6	14.0	5	21.7
-.5 - -.1	8	18.6	3	13.0
-1.0 - -.6	6	14.0	1	5.3
-1.5 - -.1	3	7.0	0	
-2.0 - -.16	2	4.7	0	
-2.5 - -.21	0		2	8.7
Total	43	100.2	23	99.7
Mean	.27		.36	
Range	-2.0 - 3.1		-2.5 - 2.7	

TABLE 5

DISTRIBUTION OF GAINS ON THE CAPITALIZATION COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
3.0 - 3.4	1	2.3	0	
2.5 - 2.9	0		0	
2.0 - 2.4	3	7.0	0	
1.5 - 1.9	2	4.7		
1.0 - 1.4	3	7.0	1	4.3
.5 - .9	6	14.0	4	17.4
.0 - .4	13	30.2	7	30.4
-.5 - -.1	8	18.6	5	21.7
-1.0 - -.6	4	9.3	0	
-1.5 - -1.1	1	2.3	0	
-2.0 - -1.6	1	2.3	0	
-2.5 - -2.1	0		0	
-3.0 - -2.6	1	2.3	0	
-3.5 - -3.1	0		0	
-4.0 - -3.6	0		1	4.3
Total	43	100.0	23	99.8
Mean	.30		.21	
Range	-2.7 - 3.2		-3.7 - 1.6	

TABLE 6

DISTRIBUTION OF GAINS ON THE PUNCTUATION COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUP

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
3.5 - 3.9	1	2.3		
3.0 - 3.4	0		0	
2.5 - 2.9	1	2.3	0	
2.0 - 2.4	1	2.3	1	4.5
1.5 - 1.9	6	14.0	2	9.1
1.0 - 1.4	5	11.6	1	4.5
.5 - .9	8	18.6	1	4.5
.0 - .4	10	23.3	3	13.6
-.5 - -.1	6	14.0	5	22.7
-1.0 - -.6	0		2	9.1
-1.5 - -1.1	2	4.7	3	13.6
-2.0 - -1.6	3	7.0	1	4.5
-2.5 - -2.1	0		0	
-3.0 - -2.6	0		1	4.5
Total	43	100.1	22	99.7
Mean	.48		.10	
Range	-1.7 - 3.5		-3.0 - 2.8	

TABLE 7

DISTRIBUTION OF GAINS ON THE LANGUAGE USAGE COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
3.0 - 3.4	0		1	4.3
2.5 - 2.9	0		1	4.3
2.0 - 2.4	0		1	4.3
1.5 - 1.9	5	11.6	2	8.7
1.0 - 1.4	4	9.3	1	4.3
.5 - .9	6	14.0	4	17.4
.0 - .4	10	23.3	8	34.9
-.5 - -.1	7	16.3	2	8.7
-1.0 - -.6	4	9.3	0	
-1.5 - -1.1	2	4.7	0	
-2.0 - -1.6	2	4.7	2	8.7
-2.5 - -2.1	2	4.7	1	4.3
-3.0 - -2.6	1	2.3	0	
Total	43	100.2	23	99.9
Mean	.04		.38	
Range	-3.0 - 1.7		-2.2 - 3.0	

TABLE 8

DISTRIBUTION OF GAINS ON THE MAP SKILLS COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
2.0 - 2.4	3	7.0		
1.5 - 1.9	3	7.0	2	8.7
1.0 - 1.4	3	7.0	0	
.5 - .9	6	14.0	3	13.0
.0 - .4	11	25.6	8	34.8
-.5 - -.1	9	20.9	5	21.7
-1.0 - -.6	3	7.0	2	8.7
-1.5 - -1.1	3	7.0	2	8.7
-2.0 - -1.6	1	2.3	0	
-2.5 - -2.1	1	2.3	1	4.3
Total	43	100.1	23	99.9
Mean	.21		.46	
Range	2.3 - 2.3		-1.6 - 2.4	

TABLE 9

DISTRIBUTION OF GAINS ON THE GRAPH AND TABLES COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
2.5 - 2.9	1	2.3		
2.0 - 2.4	1	2.3	0	
1.5 - 1.9	4	9.3	2	8.7
1.0 - 1.4	5	11.6	2	8.7
.5 - .9	5	11.6	2	8.7
.0 - .4	8	18.6	3	13.0
-.5 - -.1	6	14.0	6	26.1
-1.0 - -.6	7	16.3	4	17.4
-1.5 - -1.1	3	7.0	0	
-2.0 - -1.1	0		1	4.3
-2.5 - -2.1	2	4.7	0	
-3.0 - -2.6	1	2.3	0	
Total	43	100.0	23	99.9
Mean	.08		.21	
Range	-3.0 - 2.9		-1.8 - 2.0	

TABLE 10

DISTRIBUTION OF GAINS ON THE REFERENCE MATERIALS COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
2.7 - 2.9	1	2.3	0	
2.4 - 2.6	0		0	
2.1 - 2.3	0		0	
1.8 - 2.0	1	2.3	0	
1.5 - 1.7	5	11.6	2	8.7
1.2 - 1.4	3	7.0	1	4.3
.9 - 1.1	1	2.3	2	8.7
.6 - .8	7	16.3	4	17.4
.3 - .5	4	9.3	3	13.0
.0 - .2	7	16.3	1	4.3
-.3 - -.1	7	16.3	3	13.0
-.6 - -.4	2	4.7	1	4.3
-.9 - -.7	2	4.7	4	17.4
-1.2 - -1.0	2	4.7	2	8.7
-1.5 - -1.3	1	2.3	0	
Total	43	100.1	23	99.8
Mean	.39		.19	
Range	-1.3 - 2.7		-1.2 - 1.6	

TABLE 11

DISTRIBUTION OF GAINS ON THE MATH CONCEPTS COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
1.8 - 2.0	2	4.7	0	
1.5 - 1.7	2	4.7	2	8.7
1.2 - 1.4	5	11.6	1	4.3
.9 - 1.1	3	7.0	3	13.0
.6 - .8	7	16.3	2	8.7
.3 - .5	2	4.7	2	8.7
.0 - .2	6	14.0	4	17.4
-.3 - -.1	2	4.7	0	
-.6 - -.4	5	11.6	2	8.7
-.9 - -.7	3	7.0	2	8.7
-1.2 - -1.0	3	7.0	1	4.3
-1.5 - -1.3	2	4.7	2	8.7
-1.8 - -1.6	0		1	4.3
-2.1 - -1.9	1	2.3	0	
-2.4 - -2.2	0		1	4.3
Total	43	100.3	23	99.8
Mean	.22		-.01	
Range	-2.0 - 1.9		-2.2 - 1.7	

TABLE 12

DISTRIBUTION OF GAINS ON THE MATH PROBLEMS COMPOMENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
3.5 - 3.9	1	2.3	0	
3.0 - 3.4	0		1	4.3
2.5 - 2.9	0		1	4.3
2.0 - 2.4	1	2.3	0	
1.5 - 1.9	1	2.3	1	4.3
1.0 - 1.4	6	14.0	1	4.3
.5 - .9	9	20.9	5	21.7
.0 - .4	9	20.9	5	21.7
-.5 - -.1	9	20.9	2	8.7
-1.0- -.6	3	7.0	3	13.0
-1.5 - -1.1	2	4.7	2	8.7
-2.0 - -1.6	0		1	4.3
-2.5 - -2.1	2	4.7	0	
-3.0 - -2.6	0		0	
-3.5 - -3.1	0		1	4.3
Total	43	100.0	23	99.6
Mean	.14		.12	
Range	-2.3 - 3.9		-3.1 - 3.3	

TABLE 13

DISTRIBUTION OF GAINS ON THE TOTAL LANGUAGE COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
1.8 - 2.0	1	2.3	1	4.3
1.5 - 1.7	1	2.3	1	4.3
1.2 - 1.4	3	7.0	1	4.3
.9 - 1.1	1	2.3	0	
.6 - .8	9	20.9	5	21.7
.3 - .8	8	18.6	3	13.0
.0 - .2	8	18.6	3	13.0
-.3 - -.1	6	14.0	3	13.0
-.6 - -.4	1	2.3		
-.9 - -.7	3	7.0	3	13.0
-1.2 - -1.0	1	2.3	0	
-1.5 - -1.3	1	2.3	1	4.3
-1.8 - -1.6	0		1	4.3
Total	43	99.9	23	99.5
Mean	.23		.19	
Range	-1.3 - 1.9		-1.0 - 1.9	

TABLE 14

DISTRIBUTION OF GAINS ON THE TOTAL WORK SKILLS COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
1.8 - 2.0	1	2.3	0	
1.5 - 1.7	0		1	4.3
1.2 - 1.4	0		1	4.3
.9 - 1.1	4	9.3	1	4.3
.6 - .8	4	9.3	5	21.7
.3 - .5	7	16.3	5	21.7
.0 - .2	11	25.6	3	13.0
-.3 - -.1	6	14.0	2	8.7
-.6 - -.4	5	11.6	2	8.7
-.9 - -.7	4	9.3	2	8.7
-1.2- -1.0	0		1	4.3
-1.5- -1.3	1	2.3	0	
Total	43	100.0	23	99.7
Mean	.09		.23	
Range	-1.4 - 2.0		-1.0 - 1.7	

TABLE 15

DISTRIBUTION OF GAINS ON THE TOTAL MATH COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
2.4 - 2.6	1	2.3	0	
2.1 - 2.3	0		1	4.3
1.8 - 2.0	1	2.3	1	4.3
1.5 - 1.7	1	2.3	0	
1.2 - 1.4	3	7.0	1	4.3
.9 - 1.1	7	16.3	1	4.3
.6 - .8	4	9.3	5	21.7
.3 - .5	6	14.0	2	8.7
.0 - .2	5	11.6	3	13.0
-.3 - -.1	4	9.3	0	
-.6 - -.4	7	16.3	3	13.0
-.9 - -.7	2	4.7	3	13.0
-1.2 - -1.0	2	4.7	1	4.3
-1.5 - -1.3	0		0	
-1.8 - -1.6	0		1	4.3
-2.1 - -1.9	0		1	4.3
Total	43	100.1	23	99.5
Mean	.34		.10	
Range	-1.1 - 2.5		-2.0 - 2.1	

TABLE 16

DISTRIBUTION OF GAINS ON THE TOTAL TEST COMPONENT OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

ains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
2.4 - 2.6	1	2.3	0	
2.1 - 2.3	0		0	
1.8 - 2.0	0		0	
1.5 - 1.7	0		0	
1.2 - 1.4	0		0	
.9 - 1.1	1	2.3	2	9.1
.6 - .8	4	9.3	2	9.1
.3 - .5	12	27.9	7	31.8
.0 - .2	19	44.2	7	31.8
-.3 - -.1	6	14.0	3	13.6
-.6 - -.4	0		0	
-.9 - -.7	0		1	4.5
Total	43	100.0	22	99.9
Mean	.28		.22	
Range	-.3 - 2.4		-.7 - 1.0	

TABLE 17

SUMMARY DISTRIBUTION OF GAINS ON THE IOWA TEST OF BASIC SKILLS FOR EXPERIMENTAL AND CONTROL GROUPS

Test Component	Experimental Group		Control Group		F
	Range	Mean	Range	Mean	
Vocabulary	-1.8 - 1.3	.22	-1.0 - 1.0	.24	.08
Comprehension	-1.6 - 2.3	.17	-2.0 - 1.9	.28	.24
Spelling	-2.0 - 3.1	.27	-2.5 - 2.7	.36	.11
Capitalization	-2.7 - 3.2	.30	-3.7 - 1.6	.21	.10
Punctuation	-1.7 - 3.5	.48	-3.0 - 2.8	.10	1.49
Language Usage	-3.0 - 1.7	.04	-2.2 - 3.0	.38	1.27
Map Skills	-2.3 - 2.3	.21	-1.6 - 2.4	.46	1.07
Graphs & Tables	-3.0 - 2.9	.08	-1.8 - 2.0	.21	.19
Reference Materials	-1.3 - 2.7	.39	-1.2 - 1.6	.19	.75
Math Concepts	-2.0 - 1.9	.22	-2.2 - 1.7	-.01	.77
Math Problems	-2.3 - 3.9	.14	-3.1 - 3.3	.12	.01
Total Language	-1.3 - 1.9	.28	-1.6 - 1.9	.19	.18
Total Work Skills	-1.4 - 2.0	.09	-1.0 - 1.7	.23	.64
Total Math	-1.1 - 2.5	.34	-2.0 - 2.1	.10	1.05
Total Test	- .3 - 2.4	.28	- .7 - 1.0	.22	.23

TABLE 18

COMPARISON OF RANGE AND MEAN ON THE IOWA TEST OF BASIC SKILLS FOR THE PRE AND POST TEST SCORES FOR THE TWO GROUPS (EXPERIMENTAL AND CONTROL)

	Experimental Group		Control Group		
	Range	Mean	Range	Mean	F
Pre-test	6 - 23	11.35	6 - 21	10.09	1.127
Post Test	7-- 26	15.98	6 - 23	11.09	12.108
Experimental Group					
Pre-test vs. Post test					15.783
Control Group					
Pre-test vs Post test					.634

TABLE 19

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (VOCABULARY) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.0175	1	.0175	.08	4.00
Error (Within groups)	12.6131	63	.2002		
	12.6306	64			

TABLE 20

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (COMPREHENSION) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.1998	1	.1998	.24	
Error (Within Groups)	52.7064	63	.8366		
	52.9062	64			

TABLE 21

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (SPELLING) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.1373	1	.1373	.11	
Error (Within Groups)	80.5125	64	1.2580		
	80.6498	65			

TABLE 22

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (CAPITALIZATION) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.1249	1	.1249	.10	
Error (Within Groups)	80.8583	64	1.2634		
	80.9832	65			

TABLE 23

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (PUNCTUATION) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	1.7637	1	1.7637	1.27	
Error (Within Groups)	89.2058	64	1.3938		
	90.9695	65			

TABLE 24

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (LANGUAGE USAGE) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	2.1159	1	2.1159	1.49	
Error (Within Groups)	89.2463	63	1.4166		
	91.3622	64			

TABLE 25

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (MAP SKILLS) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.9332	1	.9332	1.07	
Error (Within Groups)	55.7944	64	.8718		
	56.7276	65			

TABLE 26

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (GRAPHS AND TABLES) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.2784	1	.2784	.19	
Error (Within Groups)	94.2528	64	1.4727		
	94.5312	65			

TABLE 27

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (REFERENCE MATERIALS) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.5940	1	.5940	.75	
Error (Within Groups)	50.4877	64	.7889		
	51.0817	65			

TABLE 28

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (MATH CONCEPTS) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.7584	1	.7584	.77	
Error (Within Groups)	63.4169	64	.9909		
	64.1753	65			

TABLE 29

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (MATH PROBLEMS) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.0074	1	.0074	.01	
Error (Within Groups)	93.2158	64	1.4745		
	93.2232	65			

TABLE 30

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (TOTAL LANGUAGE) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.1208	1	.1208	.18	
Error (Within Groups)	42.0218	64	.6566		
	42.1436	65			

TABLE 31

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (TOTAL WORK SKILLS) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.8620	1	.8620	1.05	
Error (Within Groups)	52.6356	64	.8224		
	53.4976	65			

TABLE 32

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (TOTAL MATH) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.8620	1	.8620	1.05	
Error (Within Groups)	52.6356	64	.8224		
	53.4976	65			

TABLE 33

ANALYSIS OF VARIANCE FOR GAINS ON THE IOWA TEST OF BASIC SKILLS (TOTAL TEST) BETWEEN PRE AND POST TEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	.0424	1	.0424	.23	
Error (Within Groups)	11.7154	63	.1860		
	11.7578	64			

In comparing the gains for the experimental and control groups, as measured by the Iowa Test of Basic Skills, both groups made positive and significant gains in vocabulary and comprehension. (See Tables 2 and 3). In the other areas measured by this instrument, gains were not significant for either group. The experimental procedures apparently produced no significant results for the experimental group. The gains in vocabulary and comprehension do point out, however, that the experimental group was not sacrificed in order to get at some factors of attitude change.

Based on the data presented in Tables 2 through 33, it must be concluded that the null hypothesis which states: There is no significant difference in academic achievement between students who receive the experimental treatment and the group that does not, was accepted.

In order to test the second hypothesis, data were compiled from the pre and post test scores on the School Sentiment Index.

H_{o_2} There is no significant difference in attitude change between students who receive the experimental treatment and the group that does not receive the experimental treatment.

Tables 34 through 39 report the distribution of scores obtained by the experimental and control groups, as well as an analysis of variance for both groups.

The data include the means for each group, the per cent of the subjects scoring above the mean, those scoring below the mean and the per cent who scored in the interval of the mean.

TABLE 34

FREQUENCY DISTRIBUTION OF SCORES ON THE PRE-TEST SCHOOL SENTIMENT INDEX FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
23	1	2.3	0	
22	0		0	
21	1	2.3	1	4.3
20	2	4.7	0	
19	0		0	
18	2	4.7	2	8.7
17	1	2.3	0	
16	1	2.3	0	
15	3	7.0	0	
14	2	4.7	1	4.3
13	1	2.3	1	4.3
12	2	4.7	0	
11	3	7.0	2	8.7
10	5	11.6	4	17.4
9	5	11.6	2	8.7
8	7	16.3	2	8.7
7	4	9.3	4	17.4
6	3	7.0	4	17.4
Total	43	100.0	23	99.9
Mean	11.35		10.09	
Range	6 - 23		6 - 21	

TABLE 35

FREQUENCY DISTRIBUTION OF GAINS ON THE POST TEST SCHOOL SENTIMENT INDEX FOR THE EXPERIMENTAL AND CONTROL GROUPS

Gains	Experimental Group		Control Group	
	Number	Per Cent	Number	Per Cent
26 - 27	1	2.3	0	
24 - 25	1	2.3	0	
22 - 23	5	11.6	1	4.3
20 - 21	9	20.9	1	4.3
18 - 19	3	7.0	0	
16 - 17	4	9.3	1	4.3
14 - 15	4	9.3	1	4.3
12 - 13	4	9.3	3	13.0
10 - 11	5	11.6	8	34.8
8 - 9	6	14.0	2	8.7
6 - 7	1	2.3	6	26.1
Total	43	99.9	23	99.8
Mean	15.98		11.09	
Range	7 - 26		6 - 23	

TABLE 36

ANALYSIS OF VARIANCE AND "F" RATIO FOR PRE-TEST SCORES ON THE SCHOOL SENTIMENT INDEX BETWEEN EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	23.861	1	23.861	1.127	4.00
Error (Within Groups)	134.594	64	21.166		

TABLE 37

ANALYSIS OF VARIANCE AND "F" RATIO FOR POST TEST SCORES ON THE SCHOOL SENTIMENT INDEX BETWEEN EXPERIMENTAL AND CONTROL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	358.288	1	358.288	12.108	4.00
Error (Within Groups)	1893.803	64	29.591		

TABLE 38

ANALYSIS OF VARIANCE AND "F" RATIO FOR PRE AND POST TEST SCORES ON THE SCHOOL SENTIMENT INDEX WITHIN THE EXPERIMENTAL GROUPS

Source	SS	df	MS	F	P (.05)
Between Groups	460.476	1	460.476	15.783	3.96
Error (Within Groups)	2450.745	84	29.176		
	2911.221	85			

TABLE 39

ANALYSIS OF VARIANCE AND "F" RATIO FOR PRE AND POST TEST SCORES ON THE SCHOOL SENTIMENT INDEX WITHIN THE CONTROL GROUP

Source	SS	df	MS	F	P (.05)
Between Groups	11.500	1	11.500	.634	4.06
Error (Within Groups)	797.652	44	18.128		
Total	809.152	45			

The results indicated that the treatment had a significant and positive effect upon the attitudes of the experimental group towards school.

The analysis of variance and "F" ratio for the data on the pre-test scores of the School Sentiment Index indicated that there was no significant or positive difference between the experimental and control groups before the experimental procedures were initiated.

For the control group the scores ranged from a low of 6 to a high of 21 with a mean of 10.09 on the pre-test. The post test scores for the group ranged from a low of 6 to a high of 23 with a mean of 11.09.

For the experimental group the scores ranged from a low of 6 to a high of 23 with a mean of 11.35 on the pre-test. The post test scores ranged from a low of 7 to a high of 26 with a mean of 15.98.

The analysis of variance and "F" ratio on the post test scores between the experimental and control groups indicated that there was a significant and positive difference between the groups.

The "F" ratio was 15.783 which was significant because it exceeded its critical value of 3.90 at the .05 level of confidence. Based on the data (see Tables 34 through 39), it was concluded that administration of the BICYC Model had resulted in greater gains in attitudes towards school as measured by the School Sentiment Index, for the experimental subjects in the study. The null hypothesis which states: There is no significant difference in attitude change between students who receive the experimental treatment and the group that does not receive the experimental treatment must therefore be rejected at the .05 level of significance.

To test the third hypothesis which states:

H_{o_3} There is no significant relationship between academic achievement and attitude change among the students who receive the experimental treatment and the group that does not receive the treatment.

Correlation coefficients, "z" and "t" ratios for the significance of differences between School Sentiment Index and gains on the Iowa Test of Basic Skills were analyzed and are presented in this section of the of the paper. (See Tables 40 through 43).

The relationship between School Sentiment Index Post test and the vocabulary component of the Iowa Test of Basic Skills as presented in Table 40 was indicated by an "r" of .879 for the experimental group. It was significant for it was greater than the criterion of "r" at .304 with 40 degrees of freedom at the .05 level of confidence.

The relationship between School Sentiment Index and Vocabulary on the Iowa Test of Basic Skills was indicated by an "r" of -.509 for the control group, which was not significant for it was less than the criterion "r" of .43 with 21 degrees of freedom at the .05 level of

confidence.

The "r's" for the relationship between the variables were significant for the experimental group. However, it was positive for the experimental and negative for the control group.

The relationship between the School Sentiment Index pre-test and the Comprehension component of the Iowa Test of Basic Skills as presented in Table 40 was indicated by an "r" of .782 for the experimental group which was significant for it was greater than the criterion of "r" at .304 with 40 degrees of freedom at the .05 level of confidence.

The relationship between the School Sentiment Index pre-test and the Comprehension component of the Iowa Test of Basic Skills was indicated by an "r" of .603 for the control group which was significant for it was greater than the criterion "r" of .413 with 21 degrees of freedom at the .05 level of confidence.

Both "r's" were positive and significant for the two groups on these paired variables.

The relationship between pre-School Sentiment Index and Math Problems was significant for both groups.

The relationships between the pre-School Sentiment Index and the following compoments of the Iowa Test of Basic Skills were significant for the experimental group: Language Usage, Reference Materials, and Total Work Skills.

The relationship between the pre-School Sentiment Index and the Graphs and Tables and Capitalization components of the Iowa Test of Basic Skills were significant for the control group. All other relationships were not significant.

TABLE 40

THE RELATIONSHIPS BETWEEN THE PAIRED VARIABLES OF THE SCHOOL SENTIMENT INDEX PRE-TEST AND THE ACHIEVEMENT GAINS ON THE COMPONENTS OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Paired Variables	Experimental Group "r" Criterion .304[1]	Control Group "r" Criterion .413[2]
Pre-test SSI vs Gains in:		
Vocabulary	.879*	-.509*
Comprehension	.782*	.603*
Spelling	.160	.114
Capitalization	.173	.717*
Punctuation	.247	.292
Language Usage	.808*	-.166
Map Skills	-.152	.073
Graphs and Tables	.250	.668*
Reference Materials	.399*	.120
Math Concepts	.279	.242
Math Problems	.798*	.459*
Total Language	.162	.006
Total Work Skills	.523*	.138
Total Math	.246	-.323
Total Test	.177	.105

*Significant at .05 level of confidence.

[1]Criterion .304 based on 43 pupils

[2]Criterion .413 based on 23 pupils.

TABLE 41

SIGNIFICANT DIFFERENCES BETWEEN RELATIONSHIPS OF THE PAIRED VARIABLES OF SCHOOL SENTIMENT INDEX PRETEST AND ACHIEVEMENT GAINS ON THE COMPONENTS OF THE IOWA TEST OF BASIC SKILLS FOR THE EXPERIMENTAL AND CONTROL GROUPS

Paired Variables	Experimental Group		Control Group		z_1-z_2	SE z_1-z_2	"t"	Criterion 2.00
	"r"	"z"	"r"	"z"				
Pre-test SSI vs gains in:								
Vocabulary	.879	1.376	-.509	.563	.813	.275	2.956*	
Comprehension	.782	1.045	.603	.701	.344	.275	1.251	
Spelling	.160	.161	.114	.115	.044	.272	.164	
Capitalization	.173	.177	.717	.897	.720	.274	2.628	
Punctuation	.247	.250	.292	.299	.049	.274	.176	
Language Usage	.808	1.127	-.166	.167	.960	.274	3.504	
Map Skills	-.152	.153	.073	.073	.080	.274	.292	
Graphs and Tables	.250	.255	.668	.811	.556	.274	2.029*	
Reference Materials	.399	.424	.120	.121	.303	.274	1.106	
Math Concepts	.219	.288	.242	.245	.043	.274	.157	
Math Problems	.798	1.099	.459	.497	.602	.274	2.197*	
Total Language	.162	.162	.006	.006	.156	.274	.569	
Total Work Skills	.523	.589	.138	.138	.445	.274	1.624	
Total Math	.246	.360	-.323	.337	.023	.274	.084	
Total Test	.177	.179	.105	.105	.074	.279	.265	

*Significant at .05 level of confidence.

The "t" ratio was found to be 1.251 which was not significant. Therefore, the difference between the two "r's" for the groups was not significant.

Tables 41 and 42 indicate that the comparative measures for the two groups on spelling were as follows: the "r's" were .160 and .114 for the groups. The "z's" were .161 and .115, the difference of .044 was in favor of the control group.

The "t" ratio was .164 which was not significant.

The relationships between SSI pre-test and Capitalization on the ITBS was indicated by an "r" of .173 for the experimental group which not significant. The "r" was significant for the control group. It was .413. Table 42 indicates that the "t" ratio was found to be 2.028 which was significant at the (.05) level of significance.

Table 42 shows that the comparative measures for the experimental and control groups were as follows: the "r's" were .247 and .292. The "r's" were not significant for either group. The "z's" were .250 and .299. The difference was .049 in favor of the control group. These relationships were for the punctuation component.

The "t" ratio of .176 was not significant. Therefore, the differences on the paired variable was not significant.

The relationship between Language Usage and SSI was indicated by an "r" of .808 and .166. The relationship was significant for the experimental group but not for the control group. The "z" equivalents were 1.112 and .167. The difference was .966 in favor of the experimental group. The "t" ratio of 3.504 indicated that there was significant differences between the "r's" for the two groups.

The relationship between SSI pre-test and Map skills on the ITBS was indicated by an "r" of -.152 for the experimental group and .073 for the control. Neither of the "r's" were significant. Table 41 shows that the comparative measures for the groups were "z" equivalents of .153 and .073. The difference was .080 in favor of the experimental group. The "t" ratio of .292 was not significant.

Table 41 shows the comparative measures for the two groups were as follows: the "r's" were .250 and .668 for the experimental and control groups, respectively. The "z" equivalents were .255 and .811 for the two groups. The difference between the two "z's" on Graphs and Tables was .556 in favor of the control group. The standard error of the two "z's" was .274. The "t" ratio of 2.029 was significant. Therefore, the difference between the two "r's" on the paired variables was significant.

Table 41 indicates the comparative measures for the Reference Materials component of the ITBS and SSI. The "r's" for the group were .399 and .120 with "z" equivalents of .424 and .121 with a difference between the "z's" of .303 in favor of the experimental group. The "t" ratio was not significant. It was found to be 1.106.

The "t" ratio of compared correlations of SSI pre-test and Math concepts is indicated in Tables 40 and 41. The "r's" were .279 and .242, the "z" equivalents were .288 and .245 with a difference of .043 in favor of the experimental group. The "t" ratio of .157 was not significant on these paired variables.

The relationship between SSI and Math problems as presented in Tables 40 and 41 indicated by an "r" of .798 and .459. The "z" equivalents were 1.099 and 4.97 for the two groups, respectively. The difference of .602 was in favor of the experimental group. The "t" ratio was

found to be 2.197 which was significant for it was greater than 2.000 at the (.05) level of significance.

In relationships between SSI pre-test and Total language as indicated in Tables 40 and 41, it was found that the "r's" of .162 and .006 were not significant for either group. The "z" equivalents were .162 and .006. The difference of .156 was in favor of the experimental group. The .569 "t" ratio was not significant.

Table 41 shows that the comparative measures for SSI pre-test and Total Work Skills were as follows: the "r's" were .523 and .138 for the groups. The "z" equivalents were .583 and .138 in favor of the experimental group.

Standard error was .274, with the difference between the two "z's" .445 in favor of the experimental group. The "t" ratio was not significant.

The relationship between SSI pre-test and Total Math on the ITBS as presented in Table 41 was indicated by an "r" of .246 for the experimental group which was not significant for it was less than the criterion of "r" at .304 with 41 degrees of freedom at the .05 level of confidence.

The relationship between SSI pre-test and Total Math on the ITBS was indicated by an "r" of -.323 for the control group, which was not significant for it was less than the criterion "r" of .413 with 21 degrees of freedom at the .05 level of confidence.

The "t" ratio of compared correlations of SSI pre-test and Total Math is shown in Table 41. It indicates that the "z" equivalents were .360 and .337 for the two groups, respectively. The difference between the two "z's" was .023 in favor of the experimental group. The standard

error of the two "z's" was .274.

Tables 40 and 41 show that the comparative measures for the two groups were as follows: the "r's" were .111 and .105 for the two groups. The "z" equivalents were .174 and .105 for the two groups, respectively. The difference between the two "z's" was .074 in favor of the experimental group. The "t" ratio was found to be .265 which was not significant for it was less than 2.000 at the (.05) level of confidence with 59 degrees of freedom. Therefore, the difference between the two "r's" for the experimental and control groups as indicated by the SSI and gains on the Iowa Test of Basic Skills on the paired variables was not significant.

Correlation Coefficients, "z's" and "t" ratios for the Significance of Differences Between School Sentiment Index and Gains in Achievement on the Iowa Test of Basic Skills for the Experimental and Control Groups

This section of the research report presents the correlation coefficients, "z's" and "t" ratios for the significance of the differences between the School Sentiment Index post test scores and gains on the Iowa Test of Basic Skills for the experimental and control groups.

The data on the correlation coefficients, "z's" for the significance of difference between correlation coefficients and "t" ratios for the array of relationships between the School Sentiment Index post test scores and gains on the Iowa Test of Basic Skills are presented in Tables 42 and 43 and are discussed in the paragraphs which follow.

The relationship between SSI post test and vocabulary of the ITBS as presented in Table 42 was indicated by an "r" of .953 for the experimental group which was significant for it was greater than the criterion of "r" at .304 with 40 degrees of freedom at the .05 level of confidence.

The relationship between SSI post test and vocabulary on the ITBS was indicated by an "r" of -.678 for the control group, which was significant for it was less than the criterion "r" of .413 with 21 degrees of freedom at the .05 level of confidence.

Table 43 shows that the comparative measures for the two groups were as follows: the "r's" were .953 and -.678 for the experimental and control groups, respectively. The "z" equivalents were 1.886 and .829 for the two groups, respectively. The difference between the two "z's" was 1.057 in favor of the experimental group. The standard error of the two "z's" was .275.

The "t" ratio was found to be 3.844, which was significant for it was greater than 2.000 at the .05 level of confidence with 59 degrees of freedom. Therefore, the difference between the two "r's" for the experimental and control groups as indicated by the SSI post test and gains on the ITBS on the paired variables was significant.

The relationship between SSI post and comprehension on the ITBS as presented in Table 42 was indicated by an "r" of .087 for the experimental group which was not significant for it was less than the criterion of "r" at .304 with 40 degrees of freedom at the .05 level of confidence.

The "r" of .728 for the control group was significant for it was greater than the criterion "r".

Table 43 shows that the comparative measures in comprehension for the two groups were as follows: the "r's" were .087 and .728 for the experimental and control groups, respectively. The "z" equivalents were .087 and .929. The difference between the two "z's" was .842 in favor of the control group. The standard error was .275.

The "t" ratio of 3.062 was significant for it was greater than 2.000 at the .05 level of confidence. Therefore, the difference between the two "r's" for the experimental and control groups as indicated by the SSI post test and gains on the ITBS on the paired variables was significant.

The relationship between SSI post test and Spelling on the ITBS as shown on Table 42 was indicated by an "r" of .221 for the experimental group and .158 for the control neither was significant for either group for they were less than the criterion "r's".

Table 43 shows the comparative measures for the SSI and Spelling for the two groups. The "r's were .221 and .158. The "z's" were .224 and .158. The difference between the "z's" was .066 in favor of the experimental group. The standard error was .274.

The "t" ratio was .241 which was not significant. Therefore, the difference between the two "r's" for the two groups was not significant.

The "r's" of .521 and .402 and the "z's" of .516 and .424 for the two groups are shown in Table 43. The difference between the two "z's" was .152 in favor of the experimental group. The standard error was .274.

The "t" ratio of .555 was not significant for either group. The correlations of SSI post test and capitalization were not significant as indicated by Table 43.

A look at Table 42 indicated that the relationship between SSI and punctuation was not significant for the experimental group. The "r" for this group was .242. It was significant for the control group for the "r" was .836.

TABLE 42

THE RELATIONSHIPS BETWEEN THE PAIRED VARIABLES OF THE SCHOOL SENTIMENT INDEX POST TEST AND THE ACHIEVEMENT GAINS ON THE COMPONENTS OF THE IOWA TEST OF BASIC SKILLS FOR EXPERIMENTAL AND CONTROL GROUPS

	Experimental Group	Control Group
Paired Variables	"r" Criterion .304[1]	"r" Criterion .413[2]
Post Test School Sentiment vs. Gains in:		
Vocabulary	.953*	-.678*
Comprehension	.087	.728*
Spelling	.221	.158
Capitalization	.521*	.402
Punctuation	.242	.836*
Language Usage	.543*	.829*
Map Skills	-.124	.050
Graphs and Tables	.387*	.733*
Reference Materials	.234	.207
Math Concepts	.249	-.334
Math Problems	.333*	.466*
Total Language	.014	-.065
Total Work Skills	.506*	.158
Total Math	.137	.263
Total Test	.191	-1.04

*Significant at .05 level of confidence

[1]Based on 43 pupils

[2]Based on 23 pupils

TABLE 43

SIGNIFICANT DIFFERENCES BETWEEN RELATIONSHIPS OF THE PAIRED VARIABLES OF THE POST TEST SCHOOL SENTIMENT INDEX VERSUS GAINS ON THE COMPONENTS OF THE IOWA TEST OF BASIC SKILLS POST TEST FOR EXPERIMENTAL AND CONTROL GROUPS WITH "r's", "z's", SE and "t's"

Paired Variables	Experimental Group "r"	Experimental Group "z"	Control Group "r"	Control Group "z"	$z_1 - z_2$	SE $z_1 - z_2$	"t"
Post Test SSI* vs gains in							
Vocabulary	.953	1.886	-.678	.829	1.057	.275	3.844
Comprehension	.087	.087	.728	.929	.842	.275	3.062
Spelling	.221	.224	.158	.158	.066	.274	.241
Capitalization	.521	.576	.402	.424	.152	.274	.555
Punctuation	.242	.245	.836	1.204	.959	.279	3.437
Language Usage	.543	.611	.829	1.188	.577	.274	2.106
Map Skills	-.124	.125	.050	.050	.075	.274	2274
Graphs and Tables	.387	.406	.753	.940	.534	.274	1.949
Reference Materials	.234	.239	.207	.208	.031	.274	.113
Math Concepts	.249	.255	-.334	.348	.093	.274	.339
Math Problems	.333	.348	.466	.504	.156	.274	.569
Total Language	.014	.014	-.065	.065	.051	.274	.186
Total Work Skills	.506	.556	.158	.159	.397	.274	1.449
Total Math	.137	.137	.263	.271	.134	.274	.489
Total Test	.191	.193	-.104	.104	.089	.279	.319

*School Sentiment Index.

Table 43 indicates that the comparative measures including the "z's" and "t's" were as follows: the "z's" were .245 and 1.204, the difference between the "z's" was .959 in favor of the control group. The standard error was .279. The "t" ratio of 3.437 was significant.

The relationship between SSI post test and Language usage is shown in Tables 42 and 43. The "r's" indicated that the relationships for both groups was significant.

The difference between the two "z's" was .577 in favor of the control group.

The "t" ratio of compared correlations of SSI post test and Total math are shown in Tables 42 and 43. The "r's" for the two groups were .137 and .263 for the groups. Difference between the "z's" of .137 and .271 was .134, in favor of the control group. The "t" ratio was found to be .489 which was not significant for it was less than 2.000 at the .05 level of confidence with 60 degrees of freedom. Therefore, the difference between the two "r's" for the experimental and control groups as indicated by the SSI post test and gains on the ITBS on the paired variables was not significant.

Tables 42 and 43 show the comparative measures for the two groups to be as follows on the SSI post test and Total test of the ITBS: the "r's" were .191 and -.104 for the two groups. The "z" equivalents were .193 and .104 for the experimental and control groups. The difference between the two "z's" was .089 in favor of the experimental group. The standard error of the two "z's" was .279.

The "t" ratio was found to be .319, which was not significant for it was less than 2.000 at the .05 level of confidence with 59 degrees of

freedom. Therefore, the difference between the two "r's" for the experimental and control groups as indicated by the SSI post test and gains on the ITBS on the paired variables was not significant.

Six of the fifteen relationships obtained for each group were significant on the correlation coefficients, "z's" and "t's" for the significance of difference between SSI post test and gains on the ITBS. These positive relationships existed between post SSI and the following components: vocabulary, language usage, graphs and tables, and math problems. These relationships were significant for both groups.

The "t" ratio was found to be 2.106 which was significant for it was greater than 2.000. Therefore the difference between the two "r's" for the experimental and control groups as indicated by the SSI post test and gains on the ITBS on the paired variables was significant.

The relationships between SSI post test and Map skills as presented in Tables 42 and 43 was indicated by an "r" of -.124 for the experimental group and of .050 for the control group, neither of which was significant. The difference of .075 in the "z's" of .125 and .050 was in favor of the experimental group. The standard error was .274.

The "t" ratio was found to be 1.949 which was not significant at the .05 level of confidence.

In Tables 42 and 43 the comparative measures for the two groups were indicated by the "r's" of .234 and .207 with the "z" equivalents shown as .239 and .208. The difference between the two "z's" was .031 in favor of the experimental group.

The "t" ratio of .113 was not significant. Therefore, the difference between the two "r's" for the groups was not significant.

The "t" ratio of compared correlations of SSI post test and Math concepts is shown in Tables 42 and 43. The "r's" were .249 and .334 for the groups. The "z" equivalents were .255 and .348, with the difference between the two "z's" of .093 in favor of the control group.

The "t" ratio was found to be .339 which was not significant.

The "t" ratio for the SSI post test and Math problems was .569 which was not significant. Therefore, the two "r's" of .333 and .466 and the two "z's" of .348 and .504 with a difference of .156 in favor of the control group, was not significant. Tables 42 and 43 indicate this very clearly.

Tables 42 and 43 show the comparative measures for the two groups to be as follows on the SSI post test and Total language: the "r's" were .014 and .065, the "z" equivalents were .014 and .065. The difference between the two "z's" was .051 in favor of the control group.

The "t" ratio of .186 was not significant. Therefore the difference between the two "r's" for the two groups as indicated by the SSI post test and gains on the ITBS on the paired variables was not significant.

The relationship between SSI post test and Total work skills on the ITBS as presented in Tables 42 and 43 was indicated by an "r" of .506 for the experimental group which was significant and .158 for the control group which was not significant. The "z" equivalents were .556 and .159 for the two groups. The difference between the two groups was .397 in favor of the experimental group. The "t" ratio of 1.449 was not significant.

Relationships between post SSI and comprehension, punctuation were

significant for the control group. Whereas, relationships between post SSI and capitalization and total work skills were significant for the experimental group. These relationships are shown in Tables 42 and 43.

The third hypothesis sought to determine whether there existed a significant relationship between academic achievement and attitude change among students who received the experimental greatment and the group that did not receive the treatment.

Analysis of the data provided by the cognitive instrument (ITBS) and the affective measure (SSI) failed to yield significant differences with regard to the relationship between academic achievement and attitude change among the groups receiving the treatment (see Tables 40-43).

The evidence, therefore, supports the null hypothesis which predicted that there would be no significant relationship between academic achievement and attitude change among the students who receive the experimental treatment and in the group that does not receive the treatment. The null hypothesis therefore accepted at the .05 level of confidence.

Table 44 presents a description of the behavior problems requiring the services of the counselor for the experimental group. There were eighteen categories included in the table. In eight of the categories reductions were evident in the number of times pupils were referred to the counselor. In five of the categories the number of referrals for specific problems remained the same. The chi square of 372 resulting from the data presented was not significant.

TABLE 44

BEHAVIOR PROBLEMS BEFORE AND AFTER THE TREATMENT PERIOD

Problems	Pre Treatment	Post Treatment
Fighting	12	7
Stealing	1	0
Vandalism	3	1
Weapons	1	1
Classroom Disruptions	9	2
Profanity	3	3
Refusal to do Lessons	2	1
Cheating	1	0
Disobedience	4	3
Name Calling	3	5
Teasing	0	1
Lack of Responsibility	2	2
Tardiness	9	5
Cutting Classes	2	2
Truancy	1	0
Poor Peer Relationships	7	2
Apathy	4	3
Sleeping in Class	3	3
Total	67	41
$X^2 = 372$ (not significant		

Although with the extra emphasis the problems requiring the services of the counselor did not entirely disappear, in most instances the behavior did improve.

Summary of the Findings

The data presented in this chapter were designed to test the three null hypotheses stated in the purpose of the study. The data were analyzed and interpreted at the .05 level of confidence. The data were obtained from the administration of the Iowa Test of Basic Skills (ITBS) and the School Sentiment Index (SSI).

Analysis of the data concerning gains on the ITBS yielded no significant differences between the experimental and control groups. The first hypothesis which states:

There is no significant difference in academic achievement between students who receive the experimental treatment and the group that does not, was accepted.

In comparing the gains for the experimental and control groups as measured by the ITBS, both groups, did, however, make positive and significant gains in vocabulary and comprehension (see Tables 2 and 3).

The second hypothesis which stated:

There is no significant difference in attitude change between students who receive the experimental treatment and the group that does not receive the experimental treatment was rejected.

The results indicated that the procedures tested with the BICYC Model had a significant and positive effect upon the attitudes of the experimental group towards school.

The analysis of variance and "F" ratio for the data on the pre-test scores of the SSI indicated that there were no significant or positive differences between the experimental and control groups before the experimental procedures were initiated.

The analysis of variance and "F" ratio on the post test scores between the experimental and control groups indicated that there was a significant difference between the groups.

There is no significant relationship between academic achievement and attitude change among the students who receive the experimental treatment and the group that does not receive the treatment. The hypothesis stated above was the third hypothesis to be tested.

The relationships between SSI pre-test and the comprehension component of the ITBS was significant for the experimental group. The relationships between SSI pre-test and math problems were significant for both groups.

Also, significant were relationships between pre SSI and language usage, reference materials, and total work skills for the experimental group. For the control group the following relationships were significant: graphs and tables and capitalization.

All other relationships for pre-test measures were not significant.

Analysis of the data provided by the ITBS and the affective measure the SSI failed to yield significant differences with regard to the relationship between academic achievement and attitude change among the group receiving the treatment.

The evidence supported the null hypothesis.

The first and third of the null hypotheses were accepted, while the second of the null hypotheses was rejected.

The degree of improvement in behavior problems as indicated by Table 44 was indicated by a chi square of 372. This was not a significant improvement.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V directs its attention to a restatement of the purpose, methodology and findings of the study. Also included in the chapter are conclusions based on the findings and recommendations for administrators.

Summary of the Study

The primary purpose of the study was to develop and validate a model for school success for institutional children attending public schools.

The model constructed by the researcher consisted of five components; namely, Behavior Modification, Individualization of Instruction, Campus Parents, Youth Tutoring Youth and Counseling (BICYC). The components were selected for their characteristics which would enhance attitude and achievement gains among the pupils.

A review of the related literature indicated that researchers appear to be in agreement over the need for continued research in the area of the disadvantaged as well as the development of models designed to modify inappropriate behavior and attitudes of this group.

The sample population consisted of students enrolled in Atlanta Public Schools who also resided in two orphan institutions. Sixty-six pupils were included in the study.

The experimental group were administered the (BICYC Model). The control group received the normal program of study provided by the Atlanta Public School in which they were enrolled.

Data was collected through the administration of a series of pre treatment and post treatment observations. The principal measuring instruments used in the collection of data were a cognitive achievement test and an attitude scale as a measure of affective gains. The cognitive achievement test was the Iowa Test of Basic Skills (ITBS) and the attitude scale was the School Sentiment Index (SSI). Distribution of Gains, Analysis of Variance and Coefficient Correlations were the statistical tools employed in the analysis of the data. Null hypotheses were tested at the .05 level of significance.

Discussion of the Findings and Conclusions

When the data collected from the administration of the pre-treatment measures were analyzed, experimental and control groups were found to be homogeneous in attitudes toward school. If, therefore, any attitude changes appeared during post treatment analysis and such changes were determined to be significant, it therefore would be reasonable to infer that such changes were attributable to the BICYC model rather than to any differences existing prior to the treatment. Analysis of post treatment affective instrument (SSI) results yielded significant differences between experimental and control groups. Thus it was concluded that the BICYC Model had made a significant impact on the attitudes towards school for the experimental group.

The null hypothesis was rejected at the .05 level of significance.

Data collected from the administration of the pre-treatment ITBS

failed to yield significant differences between the experimental and control groups. It was, therefore, concluded that experimental and control groups were academically homogeneous prior to the treatment. Post treatment analysis of gains for the experimental and control groups failed to produce significant differences between the experimental and the control groups at the .05 level of significance. Thus, it was concluded that the BICYC Model did not modify the academic achievement level of the experimental group significantly. The null hypothesis was accepted at the .05 level of significance.

The third hypothesis sought to determine whether there existed a significant relationship between academic achievement and attitude change among experimental subjects. Analysis of the data failed to yield significant relationships between academic achievement and attitude change among students who received the experimental treatment and the group that did not receive the treatment.

The analysis and interpretation of the findings of this study appear to warrant the following conclusions:

1. The null hypothesis which states that there is no significant difference in academic achievement between students who receive the experimental treatment and the group that does not receive the experimental treatment was accepted.

2. The null hypothesis which stated that there is no significant difference in attitude change between students who receive the experimental treatment and the group that does not receive the experimental treatment was rejected.

3. The null hypothesis which stated that there is no significant relationship between academic achievement gains and attitude change among students who receive the experimental treatment was accepted.

4. There was a more consistent significant relationship between reading and attitude toward school than other subjects and attitude toward school.

5. The reduction in the referrals to the counselor's office was positive but not significant for the experimental group.

6. The components of the model designed to improve the affective level of the experimental group had a positive and significant effect on the pupils. This tends to validate this portion of the model.

7. The components of the BICYC Model specifically designed to raise the academic level of the subjects had a very limited effect on the students in the experimental group. This causes the portions of the model designed to improve the academic level to be rejected.

Implications

The findings and conclusions of this study warrant the following statements of implications:

1. The components of the model which dealt with change in attitude were effective.

2. Attitude toward school seems to show more relationship to the subject (reading) which receives the most attention.

3. While the administration of the BICYC Model was not completely validated, it did not harm the students in the experimental group. This is evident in the gains in vocabulary and comprehension.

Recommendations for Administrators

This study constituted an exploratory examination of the BICYC Model for school success for institutional children attending public schools. The following discussion delineates possible directions for administrators.

1. Close attention should be given to the assignment of institutional children within the school. An effort at the outset to match teachers and pupils could further enhance the Campus Parent component of the BICYC Model.

2. When possible the administrator should have a hand in the interviewing and selection of teachers for schools which will be serving institutional children. This is desirable

for any school setting, but it is almost essential in the setting of the study.

3. Administrators should have the services of a full-time counselor to ensure that the institutional children can have the benefits of counseling on a daily basis if needed.

4. Administrators should provide the support services teachers need, to work with culturally disadvantaged children, as well as the educational environment necessary for all of the pupils to grow and develop.

5. In-service courses should be provided for teachers needing assistance in working effectively with institutional pupils. Released-time would insure that teachers were not penalized by having to attend these classes after the regular work day comes to an end.

In summary, the data presented indicate the necessity for educational administrative strategies which first, recognize the existence of different levels of training and expertise among the individual teachers as well as the vast differences in the personality of teachers. With these differences in mind an effective administrator must plan various in-service programs to allow for the retraining of teachers who might be assigned to the school without regard for their skills or lack of skills in dealing with the problems presented by the institutional children. In order to insure against the lack of knowledge in effectively administering the components of the BICYC Model, workshops should be conducted for the staff of the school. These workshops should be instituted prior to the presentation of the model. Resource teachers should be available to assist the staff in areas in which they are having difficulty.

The researcher planned and executed workshops in Behavior Modification and Individualized Instruction for the entire staff of the school

prior to the administration of the BICYC Model. Selected staff members were trained for the Youth Tutoring Component. All staff members were briefed in techniques of counseling for the Campus Parent Component. The counselor responsible for the individual and group counseling component had earned certification at the sixth year in Guidance and Counseling and had been actively engaged as a counselor in the school in which the BICYC Model was presented for a period of five years.

Efforts were made on the part of the administrator of the school to assign teachers on the basis of academic training and personal preference to serve as classroom teachers for the institutional children. However, due to administrative changes resulting from the increased enrollment in the school it was not always possible to control the selection and assignment of teachers. The Campus Parent Component served as a measure of alleviating this discrepancy.

Group sessions were held frequently which allowed the staff of the school to provide input as to their feelings about the progress of the program. One problem evolved concerning the Campus Parent Component which was resolved by occasionally including community children in the special outings provided for the institutional pupils. In most instances the community children accepted this as natural and did not seem to have any great problem with accepting the fact that the institutional children had some needs that were being fulfilled through this component of the BICYC Model. These needs were in most cases being fulfilled for the community children by their own families.

The components of the model relating to the effective development need little modification. However, to increase the level of academic

achievement of the pupils, measures designed to improve all areas of the curriculum, should be considered in the Youth Tutoring Youth Component of the model. Emphasis during the period of the study was concentrated mainly in the area of reading and related skills. This helps to account for the increased efficiency of the students in the areas of vocabulary and comprehension. One other area could be added to the model in the light of the results obtained from the administration of post test ITBS. That area would be one designed to further develop language skills, since there was not a significant difference in performance in this area. Therefore, the recommendation is to add the Language Experience approach to the BICYC Model. Measures would then be added to insure that this area could be fully developed.

The components of the model, then, for institutional children attending Public School would include the following components: (1) Behavior Modification, (2) Individualized Instruction, (3) Campus Parents, (4) Youth Tutoring Youth, (5) Counseling and (6) Language Experience. The model would be known as the BICYCLE Model.

Discussion

All components of the BICYC Model had been used previously in separate situations. The BICYC Model was an attempt to take the best features of each program and to combine them in order to develop a model capable of meeting the needs of the institutionalized students in the public school setting.

Continued monitoring of the program allowed the researcher to keep abreast of the changes in the youngsters participating in the experimental group. The extra attention given by the staff was a major factor in the

cutting down of disruptions in the classrooms. The opportunity to have early morning conferences with the Campus Parents diminished the number of tardy marks. Pupils were anxious to get to school before the community children just to have a few minutes alone with the classroom teacher before the regular school day began. Knowing that someone was there to share the good and bad things that happened and that someone really cared played an important role in the lives of the group receiving the treatment.

The Behavior Modification component with its system of rewards and punishments was designed to allow each child to be responsible for his own behavior. Working with the teacher he helped to set his own goals for behavior. Tangible and intangible rewards made reaching those goals worthwhile. Ignoring behavior was one of the most difficult tasks for the teacher. As long as the behavior did not disrupt the classroom too much and no one was in danger of being injured the undesirable behavior was ignored. Pupils were not as anxious to be sent out of the room for punishment if they knew they were going to miss a chance to receive a reward.

The Individualized Instruction component allowed the teacher and the youngster to sit down together and plan the type of program that best suited the needs of the individual student. The student, therefore, did not feel threatened by students he thought made better grades than he did. He was given work on his level and as a result he was able to achieve success. For many of these youngsters it was the first time they had been successful in any venture other than those classed as anti-social. It was wonderful to see a student make an "A" on a paper and know that he

had not cheated and that no one gave him something that he had not earned.

The counselor at the school conducted several mini-workshops for the staff of the experimental school. His untiring efforts in dealing with the individual problems of the institutionalized students contributed greatly to the success of the project. He was always available to handle problems that were too severe for the ordinary lay person to handle. The staff of the school, as well as the experimental group, benefitted greatly from his expertise in the area of counseling. His zeal and interest in the growth and development and personal worth of each student caused them to try hard to keep up with his expectations for them.

Emphasis in the Youth Tutoring Youth component was mainly in reading. In replicating the program it would be desirable to add some other areas such as Math and Social Studies to the program. The pupils showed marked growth in the area of reading, while gains in other areas were not as evident as reported by the ITBS testing program.

While the ITBS results did not indicate growth in areas of the curriculum other than in the areas of vocabulary and comprension skills, the mere fact that disruptive behavior diminished meant that pupils from the institutions were spending more time in the classroom. They were being challenged on their individual levels, were being rewarded for the good things they had done and their attitudes toward school were being modified.

The BICYC Model can be replicated in other situations, but might need modifications to suit the individual settings.

Among the recommendations for schools using the model with the institutionalized children, it is heartily suggested that the institution in which the children reside become a part of the planning and to implement where possible some of the components of the model at the institution. This kind of carry over is not just desirable, it is imperative to the success of the model in the school situation.

BIBLIOGRAPHY

Books

Bereiter, Carl and Englemann, Siegfried. Teaching Culturally Deprived Children in the Preschool. New Jersey: Prentice-Hall, 1966.

Bloom, Benjamin. Stability and Change in Human Characteristics. New York: John Wiley and Sons, 1964.

Bloom, Benjamin, et al. Compensatory Education for Cultural Deprivation. New York: Holt, 1965.

Breckenridge, Marian, et al. "Nutrition and Growth," in The Adolescent--A Book of Readings. Edited by J. M. Siedman. New York: Holt, 1962.

Burrichter, Arthur. Special Techniques That Work in Teaching the Culturally Deprived. New Jersey: Prentice-Hall, 1972.

Clark, Kenneth. Cultural Deprivation Theories: Their Social and Psychological Implications. New York: Metropolitan Research Center, Inc., 1972.

_____. Dark Ghetto: Dilemmas of Social Power. New York: Harper and Row, 1965.

Deutsch, Martin. "The Disadvantaged Child and the Learning Process," in Education in Depressed Areas. Edited by A. Harry Passov. New York: Teachers College, 1963.

Fantini, Mario and Weinstein, Gerald. The Disadvantaged: Challenge to Education. New York: Harper and Row, 1968.

Hunt, John. Intelligence and Experience. New York: Ronald Press, 1964.

Manuel, Herschel. Spanish-Speaking Children of the Southwest. Austin: University of Texas Press, 1965.

McClelland, David. The Achieving Society. Princeton: Van Nostrand, 1964.

Siegel, Irving and Olmstead, Patricia. "Modification of Classificatory Competence and Level of Representation Among Lower-Class Negro Kindergarten Children," in Reaching The Disadvantaged Learner. Edited by A. Harry Passov. New York: Teachers College Press, 1970.

White, Bernard. Human Infants: Experience and Psychological Development. New Jersey: Prentice-Hall, 1971.

Witmer, Henry and Kotinsky, Ruth. Personality in the Making. New York: Harper and Row, 1968.

Reports and Periodicals

Ausubel, David P. "A Teaching Strategy for Culturally Deprived Pupils--Cognitive and Motivational Considerations." School Review (Winter 1964): 454.

_____. "How Reversible Are the Cognitive Motivational Effects of Cultural Deprivation? Implications for Teaching the Culturally Deprived Child." Urban Education I (Summer 1964): 23-24.

Baron, Harold. "Samuel Shepard and the Banneker Projects." Learning Together (Summer 1964): 46.

Boger, John. "An Experimental Study of the Effects of Perceptual Training on Group I.Q. Scores of Elementary Pupils in Rural Ungraded Schools." Journal of Educational Research 46 (1952): 43-53.

Brazziel, William and Terrell, Mary. "An Experiment in the Development of Readiness in a Culturally Disadvantaged Group of First-Grade Children." Journal of Negro Education 3 (1962): 4-7.

Caldwell, Bruce. "The Effects of Psychological Deprivation on Human Development in Infancy." Merrill-Palmer Quarterly 16 (1971): 124.

Harlow, Harry F. "The Formation of Learning Sets." Psychological Review 56 (1949): 51-65.

Hess, Robert and Shipman, Virginia. "Early Blocks to Children's Learning." Children 12 (September-October 1965): 189-194.

Institute for Developmental Studies. Annual Report 1965. New York: New York Medical College, 1966.

John, Vera P. "The Intellectual Development of Slum Children: Some Preliminary Findings." American Journal of Orthopsychiatry 33 (1968): 813-22.

Kingberg, Otto. "Negro-White Difference in Intelligence Test Peformance: A New Look at an Old Problem." American Psychologist 18 (1963): 198-203.

Loadman, Walter and Parks, Anne. "Increasing the Academic Performance of Culturally Disadvantaged Students: A Diamond Among the Glass or the Possibility of a Type I Error." April 1974. Paper presented at the Annual Meeting of the American Educational Research Association (59th) Chicago, Illinois

Mackler, Bernard. "Cultural Deprivation: A Study in Mythology." Journal of Educational Sociology 66 (1965): 60-68.

Pettigrew, Thomas. "Negro American Intelligence: A New Look at an Old Controversy." Journal of Negro Education 33 (1962): 6-24.

Project Head Start. Head Start Child Development Programs. Washington, D. C.: Community Action Program, Office of Economic Opportunity, 1966.

Schorr, Alex. "The Non-Culture of Poverty." American Journal of Psychiatry 34 (1964): 907-912.

Schreiver, David. "Identifying and Developing Able Students from Less Privileged Groups." High Points 40 (1968): 4-23.

Skeels, Harold and Dye, Helen. "A Study of the Effects of Differential Stimulation and Orphan Children." Proceedings of the American Association for Mental Deficiency 44 (1939): 114-136.

Whiteman, Martin. "Developmental Theory and Enrichment Programs." Harvard Educational Review 38 (Fall 1962): 248-49.